Austria	Sch30	Iran	Rls210	Pakistan	Rs35
Bahrain	Din0.900	Israel	Shk4.50	Philippines	Pso40
Belgium	BFr60	Italy	L2200	Poland	Zl 11,000
Cyprus	C£1.00	Jordan	JD1.20	Portugal	Esc175
Denmark	DKr13	Korea	Won 2000	Qatar	QR10.00
Egypt	E£3.50	Kuwait	Fils.500	S Arabia	SR8.00
Finland	FM9.50	Lebanon	L£1,000	Singapore	S$4.10
France	FFr7.50	Lux	LFr60	Spain	Pta175
Germany	DM3.00	Malta	45 cents	Sweden	SKr13
Greece	Dr200	Morocco	MDh10	Switz	SFr2.70
Hungary	Ft145	Neth	Fl 3.50	Thailand	Bht50
Iceland	IKr180	Nigeria	Naira15	Tunisia	Din0.800
India	Rs30	Norway	NKr13.00	Turkey	L3000
Indonesia	Rp3100	Oman	OR1.20	UAE	Dh8.00

EUROPE'S BUSINESS NEWSPAPER

FINANCIAL TIMES

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Tuesday April 23 1991

D 8523A

GERMANY

Kohl's chickens come home to roost

Page 18

World News

Hong Kong losing battle of wills over new airport

Hong Kong is losing a tense diplomatic battle with China over plans to build a $12.5bn international airport, which Peking is refusing to back until it has achieved extensive control over the project. Page 4

Comeback planned

French socialist Jean-Pierre Chevènement, who resigned as defence minister in protest against the Gulf war, is planning a comeback by standing in a by-election. Page 2

Police storm square

Hundreds of Romanian riot police armed with batons and shields stormed a central Bucharest square to break up a demonstration by several thousand people.

Cholera toll fears

The cholera epidemic ravaging Peru and its neighbours could kill 42,000 people and the UN alone does not have the resources to fight it, according to the head of the Panamerican Health Organisation. Page 6

Vietnam air link

Northwest Airlines will be the first US carrier to fly to Vietnam since the war ended in 1975, with a June flight to Ho Chi Minh City. Page 6

Sununu inquiry

The US General Accounting Office has begun an inquiry into the dozens of trips taken by White House chief of staff John Sununu, using military aircraft. Page 6

Threat to shuttle

Preparations went ahead for fuelling the US space shuttle Discovery despite a 50-50 chance that a storm would delay its launch on a "Star Wars" research mission.

Support for divorce

Nearly two out of three Irish citizens favour ending the republic's ban on divorce, an *opinion poll shows*. A 1986 referendum failed to win support for changing the law.

Abortion pill ban

France banned women who smoke heavily or are aged over 35 from taking a controversial abortion pill after a 31-year-old woman died of a heart attack.

UK gas leak

An accident at Britain's secret Aldermaston weapons factory leaked as much tritium gas in a few minutes as would normally escape in three months.

Ex-premier dies

Yumzhagin Tsedenbal, Communist premier of Mongolia for 32 years, has died in exile in Moscow, aged 74.

Israel lifts ban

The Israeli army has lifted a ban on journalists freely entering the occupied territories *imposed three months ago* at the start of the Gulf war.

Military hang on

A leading member of Burma's military junta said there was no chance of a handover of power to civilians in the foreseeable future.

Secret Sikh talks

Caretaker prime minister Chandra Shekhar has opened secret talks with Sikh militants in a dramatic twist to a bitter debate over the inclusion of Punjab in India's general elections next month.

Behind bars

Geoff Muntz, 52, a former prisons minister in the Australian state of Queensland, found himself on the other side of the bars when he was jailed for a year for misusing expenses.

Heavenly body

A mysterious quasar far brighter than everything else in the universe has been discovered by British astronomers in the Canary Islands. It makes the sun appear pale.

Business Summary

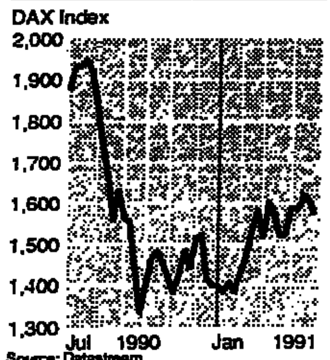
Treuhand set for DM2bn commercial paper issue

The fledgling German commercial paper market is set to receive a major boost from the east German Treuhand, the state-backed privatisation agency, which is today expected to announce a commercial paper programme of up to DM2bn, arranged by Dresdner Bank, which would make it easily the largest programme of its kind since the market began to take shape earlier this year. Page 18

SIEMENS, German electrical and electronics group, lost DM380m ($227m) on its computer activities in the first half of the financial year to September 30 1991. Page 19

MARKETS: DAX index closed 27.46, or 1.7 per cent lower at 1,571.91, its intraday low. The heavier falls in the blue chips, said the Dresdner Bank in Frankfurt, indicated that dealers were anticipating foreign

Germany



Source: Datastream

selling. However, the drop in German equity market turnover from DM5.5bn to DM5bn indicated that prices were marked down, rather than forced down by selling volume. Page 18; section II

DOLLAR was very firm, particularly against the depressed D-Mark. At the London close the dollar had also advanced to Y139.40 from Y138.35; to SFr1.4795 from SFr1.4705; and to FFr5.9475 from FFr5.8575. Its index rose to 67.1 from 66.3. Currencies, Page 38

TEXAS CORPORATE raider T. Boone Pickens is considering selling his 26.4 per cent stake in Koito Manufacturing, the Japanese motor parts manufacturer. Page 19

DAIMLER-BENZ, diversified German motor group, said its pre-tax profits fell by around 10 per cent last year, much of the decline caused by currency movements. Page 20

CUMMINS Engine, one of the world's leading diesel engine makers, suffered a first-quarter operating loss and warned of a further decline in the US heavy truck market. Page 21

OCCIDENTAL Petroleum reported net first-quarter earnings of $136m, up from $108m a year earlier. Page 22

GUINNESS MAHON, merchant banking group, 65 per cent owned by the Bank of Yokohama, warned that it would report a heavy loss in its interim results because of mounting bad debts. Page 19

SHIZUSHIN Lease, Japanese financial company with debts of Y255.5bn ($186m), filed for court protection from its creditors. Page 19

ISTITUTO Bancario San Paolo di Torino, big Turin-based bank, is negotiating to buy Banco Catala de Credit, a medium-sized Spanish bank owned by Banco Banesto. Page 20

BANCO SANTANDER, Spanish commercial bank, reported first-quarter profits up by 21 per cent. Page 20

AVON Products, world's biggest maker of cosmetics and toiletries, turned in a 20 per cent improvement in first-quarter net income. Page 22

MARSH & McLennan, world's largest insurance broker, reported first-quarter income of $96.6m after tax. Page 22

Soviet premier says force may be used to implement measures

Pavlov outlines rescue plans

By Leyla Boulton in Moscow

MR VALENTIN PAVLOV, the Soviet prime minister, yesterday put to parliament his proposed programme to deal with the country's escalating economic crisis, and suggested that the Kremlin could resort to force to implement its measures.

ANTI-CRISIS PROGRAMME

- ◆ Ban on strikes and political rallies during working hours
- ◆ Emergency measures for efficient distribution of essential foodstuffs
- ◆ Financial stabilisation measures, giving Gosbank, the central bank, power to control spending by republican governments
- ◆ *Republics refusing to sign union treaty to be charged for energy and raw materials*

Hardliners in the Soyuz (Union) group called for a state of emergency to impose a ban on strikes and bring rebel republics to heel. Mr Pavlov said in response: "They are right in two respects. There is a need for a special regime in certain crucial branches of the economy, such as energy and transport, and in certain regions."

The programme, almost certain to be approved by the Soviet parliament, foresees a ban on strikes and political rallies during working hours, and an emergency system for distributing foodstuffs. It also calls for financial stabilisation measures, giving Gosbank, the central bank, the power to control spending by republican governments.

Although it seeks to encourage privatisation and foreign investment, the plan has been criticised by the country's leading economists as too vague to combat the budget crisis and avoid hyper-inflation.

Mr Pavlov stressed at a news conference that the so-called anti-crisis programme required co-operation with the republics and that any use of force would be limited. In the case of the current coal strikes, for example, he suggested force could be used to allow working miners to cross picket lines.

"A state of emergency, or special regime, does not mean that people will be forced back to work, but it is possible to let people work with the help of force. For that purpose, we do not need the army," he said.

President Mikhail Gorbachev, who faces threats to his leadership from his own Communist party and as a result of strikes backed by opposition forces, is under pressure to opt for a coalition government capable of conducting effective economic reform.

But Mr Pavlov, joking about his own unpopularity ("Somebody's got to do the dirty work"), rejected calls for a coalition. "This is like a dialogue between the deaf and the dumb," he said, claiming his appeal a few months ago for alternative cabinet nominations had been ignored by the republics.

He added that it was not up to him to decide whether to agree to the proposal by Mr Boris Yeltsin, the Russian leader, for "round table" talks with republican leaders and opposition forces. Mr Nursultan Nazarbayev, the president of Kazakhstan, said, however, that the government could not introduce market reforms without recognising the sovereignty of republics. "This is our position and rejection of it will bury any hope for co-ordinated effective actions by all members of the Federation," he told parliament yesterday.

The programme also proposes that those republics which refuse to sign a union treaty and contribute to the union budget should be charged hard currency for raw materials and energy.

Although only eight out of 15 republics have agreed to sign the treaty incorporating them into a political federation, Mr Pavlov dismissed the alternative proposal of an economic union as set out in the 500-day programme which was rejected by Mr Gorbachev last year.

"How can you deal with partners who only hear what they want to hear and ignore what they don't like?" Mr Pavlov asked. The economic union proposal approved by the republics last year as the foundation for economic reform, committed republics to a common market and currency, a financial stabilisation programme and rapid privatisation.

Mr Gorbachev is due to discuss the draft treaty with the republics today.

Soviet disintegration "bad for Europe", Page 3

Valentin Pavlov yesterday: "special regime" needed

Kuwaiti politics shows dark side in ballroom

By Roger Matthews in Kuwait City

THE LIGHTS may be on again in Kuwait City, but not, it seems, for the fledgling opposition parties.

Their attempt yesterday to hold a press conference to comment on the composition of the new government, just hours before the visit of Mr James Baker, US secretary of state, left everyone literally in the dark as the plug was pulled on the lighting system of the ballroom at the International Hotel.

"Things are really going to get hot here now. We can already see what this new government is going to be like," said one opposition leader as his colleagues, journalists, television crews, the hotel management – and the wife of a US senator, dressed in medical garb – milled in confusion around the ballroom. The seven main opposition groups had called their press conference for 10am. The management of the hotel then claimed that no booking had been made, therefore no press conference could be held.

On to the scene came Mrs Cindy McCain, whose every second sentence reminded the listener that her husband is Senator John McCain (Republican, Arizona). Senator McCain's political career has, apparently, not been prospering of late.

Mrs McCain was also due to give a press conference in the ballroom about the work of her American Voluntary Medical Team, which she founded five years ago and which explained her attire. Sadly for Mrs McCain she failed to grasp the attention of the audience, and offered to donate the rest of her allotted time to the opposition.

At this point, the hotel management had to come clean. There was not going to be an opposition press conference in the hotel now, or perhaps at any time. To emphasise the point, the ballroom was plunged into darkness.

"It's obvious what is behind this," said Dr Sami al-Katrash, an economist from the University of Kuwait, carefully avoiding greater precision. Mr Mohammed al-Kabiri, a former ambassador who in the last eight months had the unusual distinction of being jailed in Kuwait by both his own government and Iraq, was less cautious. He said the newly constituted government was not representative of anyone.

Moscow to discuss Ecu payments system

By Peter Marsh, Economics Staff, in London

THE Soviet Union is to discuss today with three of Europe's leading banks a payments system that could ease trade among the former communist nations of eastern Europe and help them to move to a free-market economy.

Officials from Gosbank, the Soviet state (central) bank, are meeting in Turin to talk about the concept with representatives of Deutsche Bank of Germany, Credit Lyonnais of France and San Paolo Bank of Italy. These three groups have indicated general support for the idea, possibly through establishing lines of credit.

The state banks of Poland, Czechoslavakia and Hungary are also due to be represented at the meeting. An official from the European Commission, which might support the venture financially, is taking part.

The system under discussion would use the European Currency Unit, a basket of the main west European currencies, as a common financial unit in settling transactions between banks in eastern Europe that arise from trade payments.

It would replace the system formerly used in eastern Europe for trade-based banking settlements, which was based on the transferable rouble.

The transferable rouble was abolished earlier this year as part of the process of adopting western-style economic thinking in the former communist-bloc nations. Since then, trade among the countries in the region has been hit due to the lack of an alternative payments procedure.

The Ecu-based system could start in about a year, assuming planning proceeded smoothly. It would use computers and financial procedures based on an existing Ecu payments-clearing system. This was established in 1986 by a group of 45 western banks and based in Basle, Switzerland. This system handles payments of up to about Ecu30bn ($37bn) a day.

It is thought that initially the east European venture would administer a far smaller total of transactions, involving about 15 commercial banks in eastern Europe. Later, it could be extended to incorporate transactions involving banks in western Europe, so bolstering trade between the eastern and western parts of continental Europe.

According to one idea under discussion, the system could be run by a consortium of east European commercial banks, possibly with help from western partners. Representatives from four commercial banks from the former communist states have indicated an interest in this idea and are attending the Turin meeting. The banks are the International Bank for Economic Co-operation of the Soviet Union; Investicni Banka of Czechoslovakia; the Inter Europa Bank of Hungary; and Poland's State Savings Bank.

Setting up the system would cost about Ecu1m. The newly inaugurated European Bank for Reconstruction and Development has been made aware of the proposals.

Treuhand investment, Page 18

AT&T steps up bid with paper offer valuing NCR at $7.48bn

By Nikki Tait in New York and Alan Cane in London

AMERICAN Telephone & Telegraph, the US telecommunications group which has been locked for five months in a *bid battle for NCR*, the Ohio-based computer manufacturer, has increased the terms of its offer to $110 a share.

The new proposal, which values NCR at $7.48bn, replaces the cash consideration by all-paper terms. As result, NCR has failed to endorse the revised proposals, although its board has yet to make any formal comment.

Yesterday, NCR said it was concerned that if AT&T's share price fell before the offer closed, it would not be worth the full $110 a share.

Under AT&T's new proposal, which followed weekend discussions between the two companies, investors would receive 2.943 AT&T shares for every NCR share held. AT&T claimed that this was the equivalent of $110 a share, based on its market price on Friday.

AT&T added that in order to protect NCR investors it would be willing to offer up to 3.099 shares if the AT&T price averaged less than $37.375 during a 20-day period ahead of an NCR shareholder meeting to vote on the merger.

Conversely, if the AT&T price averaged more than $37.375 in the same period, NCR shareholders would get a number of AT&T shares equivalent to $110 per NCR share, and would be guaranteed not less than 2.803 AT&T shares.

Commenting on NCR's response to these contingency arrangements, AT&T said that it felt "reasonable protection" against a fall in its own share price had been provided.

In his formal announcement of the new proposals, AT&T's chairman, Mr Robert Allen, also stressed that "this is the best offer NCR stockholders will see." However, AT&T did not rule out further discussions.

Not surprisingly, AT&T's stance appeared to have some support among Wall Street arbitrageurs – who have seen the NCR share price jump in recent months from $44½ to over $100 yesterday.

AT&T's latest proposal compares with the $90-a-share offer which started the bidding in December, and valued NCR at $6.12bn. This was an all-cash offer, but NCR responded by demanding $125 a share. Its request subsequently dropped to $110 a share, while AT&T said it would be willing to offer $100 a share if NCR withdrew its opposition to the bid. In a proxy battle earlier this year, AT&T gained four places on the 12-man NCR board

Yesterday, NCR shares rose $4¾ to $101½ – well short of the $110 figure – with AT&T falling $1¾ to $36⅛. There had already been speculation that AT&T would replace the cash offer with paper terms.

AT&T said that the new proposal was subject to NCR chairman Mr Charles Exley remaining on the board for a reasonable transition period, and on a meeting betweeen AT&T and seven other senior NCR executives aimed at new arrangements to "retain their leadership".

Lex, Page 18; Background, Page 19

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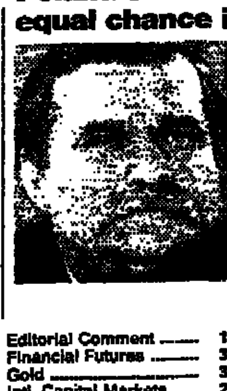
Poland's search for an equal chance in Europe



Lech Walesa, the Polish president, who begins a state visit to Britain today, outlines his vision of his country's future in an interview with FT writers **Page 17**

MARKETS

STERLING
New York lunchtime:
$1.693
London:
$1.6925 (1.722)
DM2.99 (2.89)
FFr10.065 (10.0875)
SFr2.505 (2.5325)
Y236.0 (238.25)
£ index 91.6 (92.2)

GOLD
New York: Comex Jun
$359.7
London:
$357.3 (356.45)

N SEA OIL (Argus)
Brent Jun
$19.825 (18.975)

Chief price changes yesterday: Page 19

DOLLAR
New York lunchtime:
DM1.7663
FFr5.952
SFr1.474
Y139.35
London:
DM1.766 (1.736)
FFr5.9475 (5.8575)
SFr1.4795 (1.4705)
Y139.4 (138.35)
$ index 67.1 (66.3)
Tokyo close: Y138.7

US lunchtime rates
Fed Funds $5\frac{13}{16}$%
3-mo Treasury Bills:
yield: 5.82%
Long Bond:
$95\frac{21}{32}$
yield: 8.26%

STOCK INDICES
FT-SE 100:
2,490.8 (−29.3)
FT Ordinary:
1,954.4 (−25.7)
FT-A All-Share:
1,207.44 (−1.0%)
New York lunchtime:
DJ Ind. Av.
2,929.95 (−35.64)
S&P Comp
381.46 (−2.74)
Tokyo: Nikkei
26,237.01 (−304.96)

LONDON MONEY
3-month Interbank:
closing $11\frac{13}{16}$% ($11\frac{23}{32}$)
Little long gilt future:
Jun $91\frac{3}{4}$ ($91\frac{22}{32}$)

EUROPEAN NEWS

Poll puts fate of Chancellor in question

By David Goodhart in Bonn

SUNDAY'S Social Democrat victory in a key German state election, giving the party control of the Bundesrat, the upper house of parliament, is certain to strengthen the trend towards co-operation between government and opposition.

For the first since the process of German re-unification began it has also placed a question-mark over the future of Chancellor Helmut Kohl himself.

Mr Kohl admitted yesterday that the loss of Rhineland-Palatinate, his home state, was a "bitter defeat" but said that his government could not duck unpopular decisions. He added the Social Democrats would now enjoy "a new dimension of responsibility" but stressed there would be no strategy change in Bonn and that he was not considering early retirement.

Mr Kohl, echoed by other leading members of the ruling Christian Democratic party, did say, however, that the generation change at the top of the party had to be speeded up. Mr Theo Waigel, head of the CDU's sister party, the Christian Social Union, called the result a "disaster".

Mrs Anke Fuchs, SPD general secretary, said that Mr Kohl was politically exhausted and had sunk to the level of unpopularity of 1989 before being saved by German unity "which he manipulated for electoral ends".

However, despite the boost to the SPD, the party has still to find a convincing leadership team, and as it gets drawn into accepting more responsibility for national politics will find it more difficult to score points at Bonn's expense. In national opinion polls the centre-right coalition continues to comfortably lead the SPD.

In the Rhineland-Palatinate itself the SPD will negotiate first with the liberal Free Democrats, also coalition partners in Bonn, but may following Hesse and Lower Saxony with a "red-green" coalition.

In Bonn the SPD will use its blocking power in the Bundesrat to stop the coalition's plans to abolish two local taxes mainly levied on companies.

Swedish parties attacked on policies

By Robert Taylor in Stockholm

SWEDEN'S main opposition parties – the Moderates and the Liberals – were accused yesterday of wanting to introduce Thatcherism into the country if they form a government after the next general election.

"They want to put Mrs Thatcher's discarded coat over Mother Sweden," said Mr Allan Larsson, finance minister of the ruling Social Democrats, in an attack on their joint economic programme revealed at the weekend which is designed to transform Sweden into a more market-oriented economy.

"What they want to do is nothing more than to introduce the policies that were tried out in Britain during the 1980s and which led to very high unemployment and increased social division," he added.

Today Mr Larsson will introduce Sweden's supplementary budget for 1991 which will indicate the Social Democratic alternative to the Moderate-Liberal economic programme.

The two main opposition parties have indicated they intend to fight the forthcoming general election campaign on a common economic strategy.

It contains promises for a direct cut in Sweden's value added tax from 25 per cent to between 18-20 per cent as part of a staged reduction in public spending and tax pressure for adjustment to future European Community membership.

The parties also pledge to cut the proportion of Sweden's gross national product of 60 per cent that goes to the public sector, reform the sickness insurance system to deal with the scandal of high absenteeism from work and privatise the state industry sector.

They will also abolish monopolies, encourage saving and share ownership, and strengthen market forces in the labour market as well as in the financial system and in industry.

Both Mr Carl Bildt, the Moderate leader and Mr Bengt Westerberg, leader of the Liberals said their programme would not be changed to satisfy any other possible coalition partners in a future non-Socialist government.

The Christian Democrats who are expected to enter Parliament for the first time will back the far-reaching economic manifesto. But Mr Olof Johansson, Centre party leader, said he could not agree with much of it and doubted whether the Centre would support such a market strategy.

Soviet debt to Finland falls as trade drops

By Enrique Tessieri in Helsinki

ACCORDING to figures released by the Bank of Finland, the total Soviet debt to Finland reached around FM5.6bn, ($1.4bn) at the end of last March, dropping from some FM6.5bn at the end of 1990.

The drop in the debt was mainly attributable to credits and deposits received by Finnish commercial banks from the USSR.

Of the total FM5.6bn debt owed by the Soviets to Finland, FM2.2bn was made up of over five-year-long clearing credits, FM1.2bn in five to seven-year hard-cash credits and FM1bn in one-year hard-cash credits given by Finnish banks.

Another FM400m is in a special clearing account with the remaining FM800m being hard-cash payments in arrears.

Apart from these receivables, the balance of payments in the clearing account is at present $100m in favour of the Soviets.

This money will be used to pay back the debt owed by Moscow to Finnish companies.

Finland is facing a severe recession which has also been exacerbated by the sharp plunge in trade with the USSR, after the Finnish-Soviet clearing system switched to hard currency at the beginning of 1991.

Mr Mauno Koivisto, the Finnish president told Mr Valentin Pavlov, Soviet Prime Minister, this week in London that he hoped both countries could switch back to trade based on barter.

Given the economic and political instability in the USSR, observers are sceptical of such a change.

Meanwhile, Finnair, the state-owned airline, and the Soviet airline, Aeroflot, have signed an agreement which is aimed at studying the prospects of forming a joint venture to offer air services between Leningrad and the rest of Europe.

With its home base in Leningrad, the joint venture airline would use a part of Finnair's DC-9 fleet and use Finnish airlines maintenance and training facilities in Helsinki.

Meciar may lose job as Slovakia's premier

By Leslie Colitt in Prague

MR VLADIMIR MECIAR, Slovakia's controversial prime minister, could lose his job after forming a break-away populist political movement.

His Public Against Violence (PAV) party and the Christian Democratic Movement (CDM) are now negotiating to form a new coalition government in Bratislava, the Slovak capital. Mr Jan Carnogursky, CDM's leader and currently deputy prime minister, is widely favoured to succeed Mr Meciar.

Earlier this month, the volatile Mr Meciar antagonised his party's leadership by forming a rival wing called PAV-Platform for Democratic Slovakia. He also aroused suspicion in the federal capital, Prague, by holding talks in Moscow with the Soviet military about resuming arms production at workless Slovak weapons factories.

Mr Meciar has refused to comment on his next steps but he is now expected to split formally with PAV at its congress later this month and set up a new party. Mr Meciar is mistrusted by leaders of the PAV, whose ratings have plummeted in recent opinion polls, but is very popular with ordinary Slovaks.

President Vaclav Havel has called for a referendum in the Slovak and Czech Republics on the emotive issue of independence for Slovakia. Parliament is expected to adopt the proposal shortly and the referendum could be held this summer.

The departure of Mr Meciar from the government could improve the prospects for economic reforms. He strongly advocated slowing down economic restructuring in order to soften the impact on Slovakia, which has a highly imbalanced economy.

Yugoslav industrial output tumbles

By Laura Silber in Belgrade

INDUSTRIAL production in Yugoslavia fell just over 23 per cent last month compared with a year earlier.

Croatia, the independence-minded western republic, was hardest hit ; its output fell by 29 per cent. The three-month figure for the predominantly ethnic Albanian province of Kosovo was 31.2 per cent below that for the same period last year.

The republics of Serbia, Croatia and Slovenia are all resisting the market reforms proposed by Mr Ante Markovic, the prime minister. These reforms call for the total overhaul of the country's financial and banking system and introduction of a restrictive monetary policy. The programme aims to break the hold over the economy of local political authorities.

Mr Markovic criticised the republics sharply last week for sabotaging his plans and he appealed to the federal parliament to back the reforms in the "transitional period" while the country's leaders sought a resolution to the political crisis. He said $5bn-$6bn in loans from the International Monetary Fund and western banks depended on the republics' compliance with the programme.

Yugoslavia's foreign debt totals $16.1bn and its trade deficit is more than $4.5bn.

In his address to parliament, Mr Markovic announced a 30 per cent devaluation of the dinar. He also outlined plans for restructuring the banking system and the privatisation of state enterprises which the governments of the republics have brought to a standstill.

Mr Markovic this week faces a battle in parliament for the approval of his economic reforms.

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EUROPEAN NEWS

Turks may build German homes

A state-owned Turkish bank, has offered to build mass housing in eastern Germany using cheaper Turkish labour to cut costs, a senior bank official said yesterday, Reuter reports from Istanbul.

"We can halve house prices if cheaper Turkish labour is approved," said Mr Engin Civan, general manager of Turkiye Emlak Bankasi. Bank officials said the offer by the bank's contracting arm had been welcomed by the German government.

However, some foreign workers in the former communist state have suffered racist attacks by Germans worried at the economic problems and job losses that followed union with the former West Germany.

Germans keep eye on the old enemy

The German army has been systematically checking up on Soviet forces in old East Germany without the defence minister's knowledge, military officials told Reuter in Berlin.

A Soviet sentry shot and wounded a German major outside a Soviet army base on Friday after he and two other officers were found observing a sensitive munitions depot, scene of a shooting on April 9 in which no one was hurt.

Defence Minister Gerhard Stoltenberg has now ordered a halt to "open intelligence gathering" and launched an inquiry, said a ministry spokesman.

Polish tourists beaten up

Several Polish tourists were attacked during the weekend in rising anti-Polish violence in eastern Germany, Polish media said yesterday, Reuter reports from Warsaw.

PAP news agency said 13 Poles were "brutally beaten and robbed", mostly at motorway parking lots where they stopped for the night.

A gang of 20 masked neo-Nazis attacked Poles going home by train from Leipzig. They boarded the train at Loebau and the Poles' shouts for help were ignored as the train *stood at the station.*

The mass-circulation newspaper Gazeta Wyborcza said the gang was celebrating the 102nd anniversary of the birth of Nazi leader Adolf Hitler.

Honecker 'flown out of Moscow'

Former East German Communist leader Mr Erich Honecker, flown in secret to Moscow last month on the orders of the Kremlin, has been moved to a hospital outside the Soviet capital, according to Germany's Bild newspaper, Reuter reports from Bonn.

In a report published today Bild said Moscow City Council had objected to Honecker's presence in the city.

Poles examine the country's first seven-digit banknote, issued yesterday and valued at Zl. 1m.

Walesa looks to clear air in UK

By Christopher Bobinski in Warsaw

PRESIDENT Lech Walesa arrives in London today hoping for good weather and determined to convey some "home truths" about the way western countries are dragging their feet over reuniting Europe in the twilight of the cold war.

"I perform badly when its rainy and misty" he said, adding: "I've had the sun on my other trips," referring to recent journeys to Washington, Paris and Brussels where he has urged western investors to come to Poland.

These visits have revealed west European leaders unwilling to speed integration with *post-Communist countries at* the moment when, according to Mr Walesa, "everything is possible".

In Britain he will be encouraging businessmen to put money into Poland, where the government is maintaining strict monetary controls in an attempt to lower inflation to a monthly 1 per cent by the end of the year.

Mr Walesa will meet bankers at the Bank of England on Thursday and urge them to halve the $11bn his country owes them, as western governments have agreed to do.

His visit comes in the wake of 40 hours of talks in Paris at the weekend between Polish negotiators and the representatives of 17 western countries to whom Poland owes $33bn. The talks produced a framework for *an overall 50 per cent debt* reduction.

This foresees Poland devoting $600m a year until 1994 to debt service payments, by which time the debt should have been reduced by half on condition that Poland maintains its anti-inflation programme agreed with the International Monetary Fund.

Repayment of the entire debt, however, should be complete by the year 2014.

President Walesa will be staying with the Queen at Windsor during his three-day visit. Meetings with Mr John Major and Mrs Margaret Thatcher, the present and former prime ministers, and Mr Neil Kinnock, the Labour party leader, are also envisaged.

Polish debt, Page 6

Poland issued a Zl 1m (£59) banknote yesterday, its first ever seven-digit currency unit, Reuter reports from Warsaw. The government expects inflation to fall to about 50 per cent this year after hitting 250 per cent in 1990, when a Zl 500,000 note was introduced. The new bill will make things easier for cashiers but for many Poles will remain only a symbol of affluence. The average monthly salary is Zl 1.5m.

Dollar shops face ban in Romania

ROMANIA WILL ban shops from selling goods for hard currency next month, in the next stage of its gradual move towards currency convertibility, National Bank governor, Mr Mugur Isarescu, said yesterday, Reuter reports from Bucharest.

Dollar shops proliferated in the relatively free-for-all atmosphere following Romania's December 1989 revolution.

New higher-denomination leu banknotes will also be introduced, the central bank chief told a news conference.

Mr Isarescu said sales for hard currency would be forbidden from May 3, although shops would be given several weeks to liquidate existing stocks which had already been priced. "Local currency will be the only legal method of payment, except in duty-free shops, free zones, payments made by diplomats and at airports and ports," He said.

Mr Isarescu said the central bank would bring in a 500 lei (£4.60) note from May.

Soviet disintegration bad for Europe, warns Hurd

By Robert Mauthner, Diplomatic Correspondent

THE DISINTEGRATION of the Soviet Union into separate states was contrary to the interests of the rest of Europe and the west as a whole, Mr Douglas Hurd, the British foreign secretary, said in London yesterday.

Mr Hurd, who was addressing the British Atlantic Group of Young Politicians, conceded that the western European *states could not have much* influence on developments inside the Soviet Union. That was a matter for the Soviet people themselves.

"But what we can say is that it is not in the interests of Europe as a whole, or of the west, to see the Soviet Union disintegrate into a kaleidoscope of republics, some quite weak, some divided within their own boundaries, and leaving a possibility of continuing disorder and weakness..."

What the west wanted to see was a Soviet Union which was dedicated to reform, and in which the links between the various republics were based on consent rather than on command and force. It wanted to help the Soviet Union to reform itself. Despite the setbacks in this process, preparations for the British and European Community technical assistance programmes were going ahead.

Turning to the lessons that *Europe should draw from the* events of the past year and the Gulf war, in particular, Mr Hurd expressed strong support for greater foreign policy co-ordination within the European Community.

"I can see in our dealings with the Soviet Union... over events in the Baltic states, that it really would be crazy if there were separate and contrasted British, French, German, Italian policies towards what is happening in the Soviet Union," Mr Hurd said.

However, he reiterated Britain's opposition to majority voting on foreign and security policy issues, which, Mr Hurd claimed, would have led to a less effective European reaction in the Gulf crisis.

In the aftermath of the Gulf conflict, one particular problem which the Twelve should now be considering, in co-operation with the US, the Soviet Union and China, was the problem of arms exports *and the proliferation of* weapons of mass destruction.

In spite of calling for greater intra-European co-operation on security and defence policies, Mr Hurd stressed that Nato remained "the main defence institution of western Europe and the Atlantic".

While Nato had to be reformed if it were to survive and remain relevant, to allow it to disappear would be "to spit in the face of the lessons of history. It would be a great foolishness, the kind of foolishness we committed in the past and regretted."

Moslems in clash over rights to oil

SOVIET Tatar Moslem demonstrators demanding regional autonomy clashed with police at the weekend and tried to halt the flow of oil to the west at a key pumping station, the official Tass news agency said yesterday, Reuter reports from Moscow.

Tass said police used rubber bullets to disperse thousands of demonstrators who marched on the station at the start of the "Friendship Pipeline" after a rally on Sunday in Almetevsk in the Urals region of Tataria.

Many demonstrators waved green Islamic flags or chanted "Tatar oil for Tataria" – a rallying cry in the region's bid to secure more autonomy within the Russian Federation.

"Not far from the station they were met by police and special forces who told them to stop and had bottles and rocks thrown at them from the crowd," Tass said.

Almost half of Tataria's 3.6m inhabitants are predominately-Moslem Tatars.

Hungary angry over Danube hydro project

HUNGARY yesterday attacked a Slovak plan to divert the Danube river, accusing it of breaking international law, after talks about the controversial *hydro-electric project* broke up in disagreement, writes Nicholas Denton in Budapest.

Slovakia appeared determined to continue with the Bos-Nagymaros project, despite Hungary's opposition. Mr Vladimir Meciar, the Slovakian Prime Minister, even made a veiled threat to complete construction within Slovakia's own territory, according to Hungarian officials.

"It would infringe the integrity of Hungarian territory," an official said of a Slovak scheme *to divert the Danube.*

Mr Meciar refused to rule it out as one way of circumventing Hungarian opposition. "Slovakia will not give up its intention to continue construction," he said.

Digging a new channel was one of nine possibilities being considered but the Slovak government has not made any decision.

Turkish airline cuts flights

STATE-RUN Turkish Airlines (THY), hit by a three-week-old strike by some 8,000 THY workers and 2,500 airport staff, which is costing it about $1.6m a day, said yesterday it was dropping eight foreign destinations this year, Reuter reports from Istanbul.

The national carrier said in a written statement it would end flights to Toronto, Budapest, New Delhi, Kuala Lumpur, Dhahran, Bahrain, Abu Dhabi and Amman.

Chevènement plans come-back to French parliament

By Ian Davidson in Paris

THE enfant terrible of the French Socialist Party, Mr Jean-Pierre Chevènement, who resigned earlier this year as defence minister in protest *against the Gulf* war, *is* planning a come-back to national politics and shows every sign of intending to live up to his reputation.

Yesterday he announced that he would be standing for parliament again, in a by-election in his old Belfort constituency, which is being voluntarily vacated by one of his loyal followers, Mrs Gilberte Marin-Moskovitz.

Under the French system, a politician who becomes a minister automatically surrenders his parliamentary seat, and it is then filled by the next person on his electoral list.

Only the generosity of his successor, as in this case, allows him a chance of recapturing it.

Despite Mr Chevènement's resistance to official policy during the Gulf crisis, the Socialist party spokesman yesterday said that it would support his campaign.

INTERNATIONAL NEWS

Hong Kong stumbles badly in its battle of wills with China

Peking is out-manoeuvring colonial officials over the contentious issue of who will control a proposed £7bn airport, reports John Elliott

HONG KONG is losing on points in a tense diplomatic battle with China over plans to build a HK$100bn (£7bn) international airport, which Peking is refusing to back until it has achieved extensive control over the project.

The British colony is not prepared to concede such control before it returns to Chinese sovereignty in 1997 and it is threatening to shelve the project indefinitely. This is creating uncertainty which is knocking business confidence – yesterday the local stock market plummeted by 2.32 per cent, the biggest fall since the start of the Gulf conflict last August.

Hong Kong's colonial government has also lost points recently to China on three other occasions while trying to defend its constitutional rights.

The latest occurred yesterday when Mr Gordon Wu, a prominent construction entrepreneur, was invited to Peking for talks on plans drawn up by a group of Hong Kong Chinese property developers to take over the project and finance it themselves for about HK$60bn.

Mr Wu's ace card would be to suggest to China that he and the other developers could build the airport rapidly after 1997 if Hong Kong refuses to come to terms in the next few weeks. Infuriated Hong Kong government officials see this as a spoiling tactic at a time when they are trying to persuade China to come to terms.

Another loss on points came last week after Hong Kong refused to publicise details of its options for the project, despite considerable local pressure. Top Peking officials provocatively said that they were willing to publish their ideas as soon as Hong Kong agreed, so that *local people could judge which* alternative they prefer. This led to an outspoken debate in the colony's Legislative Council last Wednesday when legislators turned on Britain and Hong Kong, not China.

But perhaps most humiliating of all was a lecture read to Hong Kong officials recently by China about fiscal discipline, control of public borrowings, and maintenance of fiscal reserves. This was not a new line, because China has been arguing that the airport project will drain reserves and weaken the economy before 1997.

The humiliation arose because the Chinese, who are not themselves renowned for strong fiscal discipline, read the lecture from Hong Kong's 1979 budget speech delivered by Sir Philip Haddon-Cave, the then powerful financial secretary. The inference was that, in order to build a massive British memorial to over 150 years of colo*nial rule, Hong Kong's current top* officials had over-ridden the strict financial ethics on which the colony had thrived.

China acknowledges a new airport is needed to replace existing congested facilities. But it has been objecting to the plans since late 1989, initially for a mixture of political and economic reasons. Now it is seeking a continuing say on the project – for example the right to examine financial borrowing and contract decisions – in addition to having seats on an airport authority board. "It wants control," says a senior official.

Hong Kong says it is only prepared to consult China. It argues that any further consensus-seeking measures would slow the project and establish a precedent for China to gain virtual control of other medium- and long-term economic and fiscal decisions before 1997.

Hong Kong's aim now is to persuade China that it is not bluffing when it says that it would prefer to shelve (or effectively cancel) the project and expand its existing Kai Tak airport. This refusal to give Peking a precedent for control is backed by Mr Douglas Hurd, the British foreign secretary, who failed to reach agreement during a recent visit to Peking and who would have to sanction any final breakdown with the Chinese.

The airport is now estimated to cost HK$100bn at 1990 prices and is the world's largest new infrastructure project apart from Gulf reconstruction.

Officials had hoped the private sector would finance 40 to 60 per cent of the HK$127bn plans (at 1988 prices) originally announced in 1989, which included linked port developments to be carried out later.

Recently it has emerged that the expected private sector element has dropped to only about 25 per cent of the HK$100bn – including bonds, loans, equity stakes and franchises for parts of the airport.

But whatever the percentage, the government now believes that China's support is essential. It fears China would attack the project if there were no agreement and that this would scare off financial backers because franchise periods and debt repayments would not start before 1997.

It might even deter six pre-qualified international construction consortia which are now waiting to be invited to submit tenders for the Lantau Fixed Link. Business confidence, on which Hong Kong depends, would slump.

Politics apart, Hong Kong could build the airport without the private sector. It has HK$75bn of basic fiscal reserves, plus an Exchange Fund which has a secret amount of accumulated investment earnings, believed to be about HK$50bn-70bn (in addition to HK$40bn needed to prop up the currency and about HK$60bn transferred temporarily as investments from the fiscal reserves).

Most of the Exchange Fund earnings could be used for the airport, but the government does not regard this as a viable option because it would be strenuously opposed by China and, possibly, by Hong Kong people.

So the future of the project before 1997 depends on agreement with China. This is a dramatic turnround from two years ago, when Hong Kong saw no need even to consult Peking fully on the plans. As late as last year top officials were saying they would go ahead on their own if China did not fall into line, using public sources for the bulk of the funds.

Hong Kong is learning painfully about China's determination to protect its inheritence over the final six years of British rule.

Kuwait says human rights abuses are over

THE EMIR of Kuwait yesterday assured Mr James Baker, the US secretary of state, that human rights violations which followed liberation from Iraq have stopped, Reuter reports from Kuwait.

"I'm told that those abuses have ceased and I was told as well that the government of Kuwait would be pleased to invite human rights organisations here to interview minorities – Palestinians and others," Mr Baker said after 80 minutes of talks with the emir, Mr Sheikh Jaber al-Ahmed al-Sabah.

Amnesty International said last week that Kuwaiti armed forces and former resistance fighters had killed scores of people, mostly Palestinians *suspected of being pro-Iraqi.* Many others suffered torture or illegal imprisonment, Amnesty said.

Mr Baker said in Jeddah, Saudi Arabia, before beginning his second visit to Kuwait since liberation, that he was concerned about the report and would raise human rights issues.

Asked after his meeting with the emir whether he had received assurances on democratisation and human rights, Mr Baker told reporters: "Yes, indeed I did. The emir, the crown prince (Sheikh Saad al-Abdulla al-Sabah, who is also prime minister) and their colleagues were very forthcoming on both of those issues...

"The crown prince has made it very clear that there were some human rights abuses in the early days following the liberation of Kuwait."

Mr Baker said both men expressed their regret that abuses happened "during a period of time when they were trying to get control over the internal security."

Mr Baker said the emir had stressed in a speech on April 7 the importance of holding parliamentary elections in 1992. Opposition leaders want him to set a date and restore within six months the parliament dissolved in 1986.

He said that the emir's assurances on democratic reforms and human rights "were very forthcoming and are received by us as such".

Earlier on Monday, Kuwait launched a campaign to collect tonnes of Iraqi weapons still held by civilians. A senior official said the government would search for thousands of guns which fell into private hands as US-led allied forces drove out Iraq's invasion army in late February.

Those who did not hand in their firearms would be dealt with according to the law, Mr Mohammed Qabandi, Interior Ministry under-secretary, said in a newspaper interview. But he did not make clear how the authorities would find out who had weapons.

● Kuwait has started registering non-Kuwaiti residents as a first step to sorting out its future population after the Iraqi occupation and the Gulf war, Reuter reports.

Officials said new identity cards would be issued to expatriates still in the country who were resident before Iraq's army invaded Kuwait last August 2.

Saddam seeks policy to partner brute force

By Lamis Andoni, recently in Iraq

THE Iraqi government's decision to launch negotiations with Kurdish opposition leaders is the latest sign that President Saddam Hussein is attempting to remain in power by means of political flexibility as well as brute force.

It might be going too far to suggest that President Saddam, who has just deployed his security forces to crush Kurdish and Shia Moslem rebellions in the north and south of the country, is in a conciliatory mood.

But the Ba'athist leadership, weakened by the allies' crushing victory over the Iraqi army in Kuwait, is desperate to secure popular support by implementing – or appearing to implement – a programme of liberalisation. It is almost as if Mr Saddam has been studying recent events in the former communist dictatorships of eastern Europe; he is trying to tinker with the old system without allowing it to collapse.

Even those Iraqis who supported the government are now aware that three decades of Ba'athist rule has suppressed rather than resolved the sectarian and ethnic problems of Iraq. The appointment of Mr Saadoun Hammadi, a Shia Moslem, to the post of prime minister (previously occupied by Mr Saddam) is one of the most visible signs of the new mood in Baghdad.

For the first time someone other than the president has been allowed to assume a high profile, with Mr Hammadi addressing the people and announcing plans for political reform and economic liberalisation. Iraqis, however, believe this is partly to deflect domestic and international attention from the unprepossessing personality of Mr Saddam until the pressure eases. With the president portrayed for the time being as a symbolic figure, any policy disasters can be laid at the door of Mr Hammadi.

Iraqi newspapers, closely controlled by the state, are even allowed to criticise Mr Hammadi and for the first time in recent memory cartoons of a senior official have appeared in the newspapers. Al-Qadisiya, the Defence Ministry newspaper, led the way with a half-page of satire in which cartoonists reminded Mr Hammadi of the shortcomings of the system.

Ordinary Iraqis, even some Ba'athists, remain very sceptical about the ability of the regime to change. Post-defeat calls for radical reform have been replaced by a sense of helplessness and despair.

From the Kurdish north to the predominantly Shia Moslem south people feel that they have no control over their own lives after the destruction of much of their infrastructure by the allies and the crushing of the internal uprisings across the country.

Those Kurds trickling back to their homes in Kirkuk and Suleimaniya do not hide their sympathy for the opposition or their fear of the government. Journalists who went on government-organised trips to the holy Shia cities of Najaf and Kerbala in the south were confronted by the defiant stares of local men and women. Damage in the south is much more serious than in the Kurdish north.

Even in Baghdad there are indications that the army's suppression of the rebellion has provoked militant feelings among Shia intellectuals.

The prospect of anarchy in a fragmented Iraq and the unconvincing political performance of the multi-party Iraqi opposition has done something – in Baghdad at least – to persuade people to give the government's much-heralded reforms a chance to work.

Kurdish leaders themselves are reluctantly talking to the government despite what they regard as previous betrayals, although they are insisting on international guarantees for any autonomy plan accepted by the regime.

Many Iraqis, however, fear that President Saddam will backtrack as soon as he feels that his grip on the country is secure.

He has pledged in a number of speeches that the process of reform is irreversible, but Iraqis say he has a long way to go before they will take him at his word.

US soldiers (right) meet Iraqi troops at Zakho in northern Iraq as the two sides attempted to co-operate in setting Kurdish refugee centres

French and British join Kurdish camps effort

FRENCH and British troops joined US forces setting up "safe havens" for Kurds in northern Iraq yesterday and Kurdish rebel leaders pursued top-secret autonomy talks in Baghdad with the Iraqi government for a third day, Reuter reports from Nicosia.

US marines set up the nucleus of a refugee camp near Zakho on Sunday as Iraqi troops, told by Washington not to interfere, withdrew to the south.

The aim is to tempt half a *million Kurdish* refugees out of squalid camps on the Iraqi-Turkish border and into temporary, well-organised settlements under allied military protection.

There is no similar relief effort on the Iraqi-Iranian frontier, to which 1m refugees have fled in the mass exodus caused by suppression of two revolts last month.

Many of the refugees are sceptical of the plan and much depends on the outcome of the Baghdad talks on the future of Iraq's Kurdish provinces.

Japan to send minesweepers

The Japanese government yesterday gave final approval to the despatch of minesweepers to the Gulf, on what will be the Japanese military's first mission on active service overseas since the Second World War, Stefan Wagstyl reports from Tokyo.

Leaders of the ruling Liberal Democratic Party decided to override objections from critics who argued that sending troops abroad would infringe the country's peace constitution. A fleet of six ships and 500 men will set off before the end of the week on the month-long voyage to the Middle East.

The government has twice before considered sending minesweepers to the Middle East, only to drop to drop the idea later in response to intense opposition – first during the Iran-Iraq war in 1987 and again during the Gulf crisis last year.

Kuwaiti terminal reopened to all

Shuaiba, Kuwait's largest container terminal, was cleared for general traffic by the emirate's authorities yesterday, *Paul Abrahams writes from* Kuwait City. The port's opening should help reduce shortages of essential supplies in the country.

Although Shuaiba was re-opened last month, only government-chartered ships were allowed to use its facilities. Otherwise, imports were flown in by military aircraft or trucked along heavily damaged roads from Saudi Arabia. Routes from Iraq, from where most of Kuwait's pre-war supplies came, are closed.

The port, which has a capacity of 7m tonnes a year and can handle 20 ships simultaneously, will be taking on labour next week, according to Captain Abdul Al-Naibari, the director general of the Kuwait Ports Authority.

The decision to re-open Shuaiba follows extensive clearance of mines and unexploded ordnance by United Nations underwater explosives experts.

Italians awarded telecom contract

Italcable, the international telecommunications subsidiary of Italy's STET state-owned group, has won a contract to re-establish all Kuwait's telex links with the outside world, Haig Simonian reports from Milan.

A value for the deal, which is for three years at the outset, has not been disclosed. However, Italcable says it also hopes to be involved in future work on developing Kuwait's telecommunications systems.

S Korea's industry giants pick their core businesses

By John Ridding in Seoul

MOST OF South Korea's largest *chaebol*, the highly diversified conglomerates which dominate the country's economy, have selected the three subsidiaries which they will develop as core businesses under a government plan to increase industrial specialisation and international competitiveness.

In submissions to the Office of Bank Supervision and Exchange – the government banking watchdog – which were released yesterday, all but six of the conglomerates nominated their three "core" business groups. The selected subsidiaries will be freed from restrictions on bank lending which were imposed on the *chaebol* in 1984 and which were aimed at limiting economic concentration.

The six which have not yet selected core businesses have had the deadline extended from last weekend until the end of this month.

The selections have raised concerns about overlapping investments and fierce competition in several industrial sectors. Many of the *chaebol* have chosen subsidiaries from the same industries for specialisation. Twelve of the 30 conglomerates, for example, have selected petrochemicals. Cars and electronics were also common choices.

The new policy, which will be implemented from June 1, is intended to increase specialisation among Korea's business giants by providing credit *incentives to concentrate on a* smaller number of activities. The government argues that more focused investment in technology and productivity is needed to increase Korean competitiveness in international markets.

Chaebol subsidiary companies other than the three selected will see existing credit controls tightened. The Ministry of Finance said the government was deciding how to apply the squeeze.

While the *chaebol* oppose the existing policy of credit constraints, they have strongly criticised the government's moves to make them specialise. A statement by the Federation of Korean Industry, which represents the large *business groups, compared the* new policy to a lottery.

Most industry observers believe it will be difficult for the government to enforce the policy and, in particular, to prevent funds flowing from selected group companies to other subsidiaries.

There were few surprises in the subsidiaries selected by the various companies. Samsung Group, the largest of the conglomerates, which last year recorded sales of $43.4bn (£24.2bn), selected Samsung Electronics, Samsung Shipbuilding and Heavy Industries and Samsung General Chemical as its core businesses.

Hyundai Group, the second biggest conglomerate, and Lucky Goldstar, the third biggest, *also selected* petrochemicals as one of their choices. Daewoo Group, the fourth largest *chaebol*, did not select Daewoo Motors, its 50-50 joint venture with General Motors of the US. But it did select Daewoo Shipbuilding and Heavy machinery, which will soon start to manufacture mini-cars.

As well as free access to bank credit, the companies chosen will have restrictions on real estate purchases lifted.

TEN BIGGEST GROUPS AND THEIR SELECTED COMPANIES

Group	Selected subsidiaries
1. Samsung	Samsung Shipbuilding & Heavy Industries
	Samsung Electronics
	Samsung General Chemical
2. Hyundai	Hyundai Motors
	Hyundai Petrochemical
	Hyundai Precision Industries (Shipbuilding)
3. Lucky Goldstar	Lucky Ltd. (petrochemicals)
	Goldstar (electronics)
	Goldstar Electron Devices
4. Daewoo	Daewoo Corporation
	(textiles, construction trading)
	Daewoo Electronics
	Daewoo Shipbuilding
5. Sunkyong	Yukong (oil refining)
	SKI (textiles)
	SKC (audio and video tapes)
6. Ssangyong	Ssangyong Cement
	Ssangyong Oil Refinery
	Ssangyong Motors
7. Hanjin	Korean Airlines
	Hanil Development (construction)
	Hanjin Shipping
8. Hyosung	Tongyang Nylon
	Hyosung Heavy Industries
	Hyosung Corporation (trading)
9. Korea Explosives	Korea Explosives (chemicals)
	Kyungin Energy (oil refining)
	Hanyang Chemical
10 Kia	Asia Motors
	Kia Machine Tool
	Kia Steel

Source Office of Bank Supervision and Examination

China warned to cool its economy

A SENIOR official warned yesterday that the brakes had to be put on China's economy to protect a fragile recovery and avoid runaway inflation, Reuter reports from Peking.

"From last year's suitable policy of increasing demand to promote economic recovery, we must turn to a policy of controlling demand in a planned way," Zhang Zhongji, of the State Statistical Bureau, said.

"The basis for a sustained growth of the national economy is still rather weak or fragile," said Zhang.

China's unwieldy economy has long lurched between boom and bust, and this time it is headed for a boom. Industrial production grew 13.7 per cent in the first quarter over the same period in 1990 when it was stagnant. Retail sales, once squeezed by an austerity programme – now all but abandoned – surged 13 per cent in the same period.

Zhang pointed to a variety of problems facing the economy, such as renewed inflation in cities, mounting stocks of unwanted goods at loss-making state enterprises, and a huge surplus of unused credit left from an easing of monetary policy. Chief among the culprits are state enterprises, more than one-third of which are losing money because they make goods that consumers do not want, or cannot afford.

Taiwan moves to end 'state of war'

By Peter Wickenden in Taipei

TAIWAN'S National Assembly yesterday rapidly finished revising the constitution to end a state of war with China that has lasted for 43 years – in the absence of opposition and independent delegates who walked out in protest.

Chiang Kai-shek's nationalist Chinese government suspended the constitution with additional emergency clauses, and declared a "Period of Communist Rebellion" just before it was driven to Taiwan by Mao's Communist forces in 1949.

The removal of the clauses allows President Lee Teng-hui to end the period of "Communist Rebellion" in early May and usher in a new era of constitutional democracy for Taiwan.

Taipei hopes it also signals the start of a new relationship with the communists in Peking, from whom it is expecting a positive response. Both governments still staunchly claim sovereignty over all of China including Taiwan, but a rapprochement of some sort has been forced upon them by growing interchange between their peoples in recent years.

The opposition Democratic Progressive party and a number of other groups oppose the National Assembly's adoption of a constitutional reform package that allows the president to keep emergency powers.

Israeli right sees no change on settlements

By Hugh Carnegy in Jerusalem

EXTREME right-wing members of the Israeli government said yesterday Mr Yitzhak Shamir, the prime minister, had promised them he would not compromise on Jewish settlement of the occupied territories despite Washington's protests that continued settlement could upset its Middle East peace effort.

Meanwhile Mr Yossi Ben-Aharon, head of the prime minister's office, said the government would not accept any Palestinian from Jerusalem in a Palestinian delegation to talks and opposed extending the role of a proposed regional peace conference beyond an opening function to later bilateral negotiations.

Both issues – along with settlements – are among the obstacles to convening Arab-Israeli talks that Mr James Baker, the US secretary of state, will seek to overcome when he returns to Israel today for further talks.

Mr Shamir met the Tehiya party, a three-member faction in the coalition led by the Likud party, and a group of settlers to discuss their concerns. Ms Geula Cohen, a Tehiya junior minister, said afterwards Mr Shamir had "promised that settlement will not be harmed".

Ending Jewish settlement of the West Bank and Gaza Strip is a key demand of Palestinians and other potential Arab peace conference participants. But Mr Shamir's government has repeatedly vowed that it should continue.

Yesterday, opposition politicians published a report they said showed mortgage subsidies beyond those available in Israel proper were on offer to settlers to encourage faster settlement.

● Mr Baker won Saudi Arabia's support yesterday for an early Middle East peace conference, Reuter adds.

Asked whether the kingdom might hold direct talks with Israel, Prince Saud said the important thing was "to focus on ending the Palestinian problem".

Palestinians fear Israel may use a regional conference to make peace with Arab neighbours and sidetrack their aspirations for an independent state.

De Klerk urges more UK links

By Michael Holman, Africa Editor

PRESIDENT F.W. de Klerk of South Africa yesterday opened a two-day visit to London with *a private meeting with* representatives of banks and financial institutions, at which he called for the strengthening of trade and investment links between Britain and Pretoria.

South African officials declined to disclose further details. Mr de Klerk was accompanied by his deputy foreign minister, Mr Leon Wessels, who met Mr Douglas Hurd, the UK foreign secretary, in the afternoon.

Mr de Klerk was due to hold a working dinner with Mr John Major, at which the British prime minister was expected to ask him to assess progress in efforts to negotiate a post-apartheid constitution.

Also on the agenda are the *political* violence in South Africa and prospects for the country's return to the international sporting arena.

Today Mr de Klerk will address the conference of the Institute of Directors, and speak at the Royal Institute for International Affairs in the evening.

He leaves tomorrow for Denmark, before flying to Ireland on Thursday and back to London on Friday to speak to the Confederation of British Industry and the UK-South Africa Trade Association.

● Amnesty International, the human rights organisation, yesterday criticised what it called "the lack of accountability" of the South African security forces.

Amnesty said that there was "a pattern of unlawful behaviour by members of the security forces" which lent weight to "allegations of unprovoked use ... of lethal force."

The statement called on the government "to bring to justice those members of the security forces responsible for human rights violations".

Earlier this month the African National Congress accused Pretoria of complicity in township violence. Mr Nelson Mandela, the ANC deputy president, is due to raise the issue when he meets Mr Major tomorrow.

هكذا من الاصل

Earth Day brings criticism of progress on environment laws

By Nancy Dunne in Washington

MILLIONS of Americans celebrated Earth Day yesterday amid concern about political stalemate over environmental legislation.

Two controversial laws are due for renewal this year: the Resource Conservation and Recovery Act, the federal law governing disposal and management of hazardous wastes, and the Clean Air Act. Environmentalists say the outlook for both is dim, thanks to lack of leadership by the White House and in Congress.

Mr Jim Middaugh, spokesman for the Environmental Defence Fund, said bills to renew and strengthen both acts were plagued more by regional disagreement than by partisan differences. In the case of the waste disposal legislation, those states with large tracts of surplus land were concerned about becoming dumping sites for those with little free land and high populations.

No consensus has emerged about incineration methods. "Do you incinerate or do you prevent production?" Mr Middaugh said. "Some want recycling, some want wastes burned as fuels, some want that prohibited. Environmentalists generally want to see a reduction in the process of materials that create hazardous wastes."

On the Clean Water Act, there are disputes between those who want to develop stricter standards and those municipalities desperately in needs of federal funds to meet current standards. Growth plans of some cities are being limited by disputes over sewage treatment.

Little progress is also expected on energy conservation measures, despite a study published by the National Academy of Sciences this month demanding action to combat the "greenhouse effect".

The academy's recommendations included: tax incentives or regulation to achieve a 30 per cent increase in car fuel efficiency; use of new fluorescent bulbs to reduce the power used in lighting by 50 per cent; more efficient motors to reduce industrial energy demand; tougher standards for appliances; and a restructuring of energy prices to reflect their costs to the environment.

The administration responded by restating its opposition to energy taxes and to more stringent federal efficiency standards.

Farm deal upsets Falklanders

Is the unloved FIC being paid too much? John Barham reports

WHEN the Falkland Islands government announced on April 6 that it planned to buy out the last big absentee landowner left on the islands, it probably expected the deal to be received as a triumph of local power over the unloved Falkland Islands Company (FIC).

However, opposition to the sale quickly began to grow as purchase terms for the four FIC farms emerged. Less than a week after the announcement, a straw poll by the local radio station found that 36 of the 50 people questioned rejected the deal.

The government has agreed to pay £4.85m for the farms, which cover 974,000 acres of prime land in the southern half of East Falkland. Other payments raise the net price to £5m, or 13 per cent of government revenues.

Most critics focus on the price FIC won for the farms. Mr Bill Luxton, a councillor who bitterly opposes the acquisition, said: "It's not the concept that is wrong. I'm all for getting the land out of the hands of FIC." But he argues that the farms and their 200,000 sheep have been grossly overvalued, claiming that the Falklands have handed Anglo United, FIC's troubled parent company, a £3m "donation".

Mr Gerard Robson, one of the councillors who negotiated with Anglo, conceded that "with the present state of wool prices you can't argue that this is a brilliant deal."

The farms' only significant product is wool. Wool prices have crashed to a 50-year low and no farmer is making money. So the Falklands should have received a discount from FIC instead of paying a premium.

However, FIC says it had another potential buyer who had offered as much as £6m for the farms.

Officials admit that covering losses at the farms, which produced 29 per cent of last year's wool output of 2,591 tonnes, will raise the acquisition price to £8m over the next three years. Mr Derek Howatt, chief financial officer, says the purchase may push the government into an operating deficit this year.

Still, the legislative council is unlikely to reject the sale. Mr Robson, like most councillors, says it is worth paying a premium to wrest control of the islands' economy from FIC, which, established by royal charter in 1852, wielded almost feudal powers in the Falklands until the 1970s.

Naturally, many people are questioning the wisdom of making the government a big landowner at a time when state economic intervention is being rolled back all over the world. However, Mr Ronald Sampson, the government chief executive, says: "We will take a very hard commercial line in running the business. But we will not announce redundancies in the medium term. If [the farms] have no long term future they will be allowed to go to the wall."

The government can also be criticised for failing to loosen FIC's grip over the islands' economy. Its shipping, retail and service operations remain intact. These sectors are probably the most lucrative part of FIC's operation.

Although Anglo United refused a government offer to buy FIC outright, it decided to give the government "for no consideration" a half-share in its subsidiary Darwin Shipping. Darwin is a charter company that handles nearly all the islands' foreign trade. By making the government a partner, FIC probably expects it will be less anxious to break its oligopoly.

Strangely, the sale has highlighted the islanders' lack of self-confidence. The Falklands remain very much a colony with appointed officials such as Mr Sampson running local government. All big decisions must first be approved in London, sometimes at cabinet level.

British officials say in private that the islanders often fail to grasp complex issues, such as the land deal, fully. For their part, islanders fear that the British government subordinates their interests to its own political aims.

Conspiracy theorists suspect that obscure geopolitical or vested interests were the "real" reason behind the land sale. They say the government was suspiciously quick to accept a sale that may not be in the islands' best interests.

The Falklands have grown rich quickly through the sale of fishing licences. This year licences will raise £23.7m for the treasury. The government had earlier convinced the islanders to save as much of the windfall as possible. But now it has agreed to a deal that will cost this year's budget surplus.

Mr Ray Evans, a farmer, says: "If they could only give a solid reason for paying such a high price, it would calm a lot of people."

But Mr Rodney Lee, once a farm hand and now the owner of a successful sheep farm, summarises the islanders' dilemma: "I've done a lot of bowing and scraping in my time. We have been dictated to all our lives. All that ended after the [1982 Argentine] invasion. But we don't have many local people who are qualified to take complex decisions."

Sununu: disliked

Congress looks into Sununu's travels

By Nancy Dunne in Washington

THE US General Accounting Office, the investigative arm of Congress, has begun an inquiry into the dozens of trips taken by Mr John Sununu, the White House chief of staff, using military aircraft for what may have been personal and political purposes.

The investigation was requested by Congressman John Conyers, chairman of the House government operations committee. The Michigan Democrat lost no time in pouncing on the opportunity to discredit Mr Sununu, who is heartily disliked by many congressional Democrats.

An account of Mr Sununu's trips was given in the Sunday editions of the Washington Post and US News and World Report magazine. The Post said Mr Sununu had taken more than 60 trips in the past two years which included visits to New Hampshire, his home state, and to Colorado ski resorts.

Mr Sununu reimbursed the government for the trips at the rate it would have cost him to fly commercially. However, his use of military aircraft costs thousands of dollars more.

On one trip, to Aspen, Colorado, he reimbursed the government $1,076 (£601). However, according to the Post, the cost to the Air Force was more than $30,000.

Administration officials rushed to Mr Sununu's defence, portraying the use of military aircraft as necessary so that the chief of staff could maintain constant communications with the president.

US airline plans flights to Vietnam

NORTHWEST Airlines will be the first US carrier to fly to Vietnam since the war ended in 1975, with a flight to Ho Chi Minh City on June 25, Hanoi civil aviation officials said, Reuter reports from Hanoi.

The officials said Vietnam had approved the scheduled flights. "Northwest is planning to fly to Vietnam beginning 25 June, once a month, in a jumbo 747," one said.

Western diplomats in Ho Chi Minh City said the flights had been cleared by the US Treasury Department. Washington's trade embargo against Hanoi has blocked such flights in the past.

The International Organisation for Migration (IOM) has chartered the Northwest flights to carry Vietnamese for resettlement in the US under a bilateral orderly departure programme (ODP), foreign diplomats said.

Regulators propose higher capital levels for US thrifts

US SAVINGS and loan industry regulators have proposed higher capital levels for the more thinly capitalised thrift institutions, Reuter reports from Washington.

The Office of Thrift Supervision (OTS), which supervises the thrift industry, said under the proposal that all but the healthiest thrifts would have to hold core capital of 4 to 5 per cent of assets or higher.

Strongly capitalised institutions would continue to be subject to the existing minimum core capital level of 3 per cent of assets. The OTS has issued the proposal for public comment over 30 days.

For those thrifts forced to meet the higher capital levels, the OTS said it will decide the exact amount for each institution based on the level of risk it faces and the quality of its risk management.

The new capital levels would align thrift capital requirements with those put in place for commercial banks last September by the Office of the Comptroller of the Currency.

The OTS said its proposed capital levels would not change the other two capital standards a thrift must meet. These are a risk-based requirement of 8 per cent of risk-weighted assets and tangible capital of 1.5 per cent of assets.

The OTS said all three standards were minimums, and it expects thrifts to hold more capital than the standards require.

Menem's fiscal policy attacked

By John Barham in Buenos Aires

ARGENTINA'S Catholic bishops have attacked the "unjust" economic policies of President Carlos Menem, blaming them for creating an ever-wider gap between rich and poor.

In a strongly worded note issued over the weekend, the bishop's also condemned widespread corruption which "is destroying us as a people and as a society."

The note, issued at the end of the annual bishops' conference, is the second time in as many months that the powerful Catholic church has taken issue with Mr Menem. Last month they warned that "generalised corruption" was undermining support for the government.

The traditionalist hierarchy's latest broadside is significant because in the past it firmly supported conservative, often military, governments. Mr Menem, although nominally a Peronist, has adopted pro-business and free market policies.

UN 'lacks resources to fight cholera epidemic'

THE United Nations alone does not have the resources to fight the cholera epidemic ravaging Peru and its neighbours, according to Mr Carlyle Guerra, the head of the Panamerican Health Organisation, an offshoot of the World Health Organisation, AP reports from La Paz.

Mr Guerra told a health ministers' meeting at the weekend that 42,000 people could die from cholera unless firm measures were taken soon. However, he turned down a request from the health ministers of Peru, Bolivia, Colombia, Venezuela and Ecuador to create a joint fund to fight the disease, citing a lack of resources.

Instead, Mr Guerra proposed an emergency programme calling for international co-operation to check the epidemic and appealing for individual nations to send aid. He said the lack of basic sanitary services, malnutrition and inefficient medical systems were contributing to the spread of the disease.

The health ministers, meeting in the city of Sucre, 350 miles southeast of La Paz, were expected to sign an agreement yesterday to adopt joint measures to control the epidemic.

More than 1,200 people have died of cholera already in South America – the vast majority in Peru. More than 3 per cent of Peru's 22m people have been infected, and cholera has already spread to four of Peru's five neighbours: Chile, Ecuador, Brazil and Colombia.

WORLD TRADE NEWS

US, Japan groups to develop new chip technologies

By Robert Thomson in Tokyo

AT&T Microelectronics, the US electronic equipment maker, and NEC, the Japanese electronics company, will jointly develop technologies to make future generations of semiconductors, they said yesterday.

The agreement comes as Washington and Tokyo are negotiating a new pact on semiconductor market access in Japan, and is a sign Japanese companies intend to build closer links to the US electronics industry, in an attempt to reduce trade tension.

For the next two years, the two companies have agreed to develop jointly the manufacturing processes for further miniaturisation, enabling them to increase the memory capacity and functions of an individual chip.

While other semiconductor companies compete to develop similar technology, executives of the two companies said the joint effort would provide big advantages. Mr William Warwick, president of AT&T Microelectronics, claimed developing the 0.35-micron process, as the system is known, is likely to cost $400m (£232m)-$500m.

A micron equals a millionth of a metre. The smaller the micron measurement, the more advanced the chip. The next generation of memory chips, 16-megabit chips, are being developed using 0.5-micron technology.

AT&T and NEC are aiming for even more chip generations with the 0.35-micron technology. The companies will be sharing sensitive technologies in ultra-fine etching and circuiting, but say they are likely to have few problems in sorting out ownership rights of new processes.

"If the patent is developed from the joint effort, it will be used by both of us. If there are necessary patents that we already own, they will be licensed for the joint work," Mr Warwick said.

The companies plan to break down the development process into tasks they call "modules", with 50-70 researchers from each company working on each module. There will be about 25 of these modules, and the two companies will exchange at least one researcher for each module, and have agreed to report regularly on progress.

The project follows a more general pact signed in March last year, where the companies agreed to co-operate in semiconductor development.

"The relationship represents a win-win situation for both companies. Through partnering, each company shares resources, lowers individual company risks and gains timely access to technology," Mr Warwick said.

Mr Tomihiro Matsumura, NEC executive vice-president, said the agreement represents "true co-operation between two multinational semiconductor companies", and proves the enthusiasm of each for "a long-term co-operative relationship".

The US prepares to repel Chinese software pirates

Peking is being challenged to prove that it can protect foreign intellectual property, writes Lynn Curry

UNDER pressure from the US and other foreign business executives, China is attempting to strengthen its patent law and develop a code for the protection of computer software manufacturers, but is hampered by conflicting domestic interests.

The Chinese government is also making efforts to revise its patent law and draft copyright regulations to protect computer software manufacturers, but doing so involves many Chinese companies and "could be a hard job", according to the official English language China Daily.

China's lack of copyright regulations and its limited patent law were the subject of discussion between the Chinese and a visiting US official in February.

"The concern is enormous", said the official, Mr Joseph Massey, assistant US trade representative. "If the problem of piracy of software doesn't get fixed, we will have to take action."

While software piracy is rampant, illegal copying of other proprietary works is also widespread. Entire sections of some bookstores only sell unauthorised copies of foreign books.

Other examples of piracy include records, video tapes, computer hardware and even the Disney characters, Mickey Mouse and Donald Duck. The purpose of Mr Massey's visit was to determine how much progress the Chinese have made towards drafting copyright legislation which would provide effective protection for computer software manufacturers.

"It's at an early stage, but we have a lot of problems with what we have seen," Mr Massey said.

The trade representative said China must show progress on its draft copyright regulations before April 15, the statutory deadline under US law, when the trade office makes recommendations to the administration about retaliatory actions against countries deemed to be following unfair trade practices with the US.

This can result in additional tariffs on a country's exports to the US. China is already on a "priority watch" list, because of concern about the piracy problem and inadequate efforts to prevent it.

In an effort to resolve the problems, a Chinese delegation was expected in Washington in mid-April for talks on intellectual property rights and bilateral scientific co-operation.

China's current patent law does not provide adequate protection for chemical and pharmaceutical products, according to western lawyers. It protects only the process by which a compound is made, not the product. If a chemical process is altered only slightly, pirated versions of an already patented compound could be made legally in China. The Chinese are considering expanding the patent law, extending the protection period for inventions to 20 years from the present 15 and widening protection to include the product directly obtained by such a process, according to the China Daily.

Even Disney characters have fallen victim to pirates

But the debate is believed to be deadlocked, with some ministries supporting the proposed revision and the Ministry of Chemical Industry fighting it.

Apart from problems with pharmaceutical products, software piracy has reached epidemic proportions in China. US software manufacturers estimate that unauthorised copying of software has resulted in $400m of annual lost sales to China.

The traditional Chinese approach to copyright and other intellectual property issues differs significantly from the western view that some works have proprietary ownership.

"The Chinese consider it an honour to lift someone else's work and publish it," said one Western businessman involved with copyright problems.

"The Chinese have a much harder time formulating a law which is acceptable to the west, because the idea of certain work belonging to an individual is antithetical to socialist precepts," one western lawyer said.

A vague copyright law will become effective in June. Western observers say problems with the legislation arise not only with its vagueness but with the implementing regulations being debated by Chinese officials. The law does not stipulate on the time limit that a work can be protected, and it states that a foreign work can only be protected if it was first published or produced in China, according to western lawyers.

Much secrecy surrounds implementing regulations which would provide more detail about the scope of the copyright law.

Mofert is believed to favour strong copyright regulations, while ministries – such as the Ministry of Chemical Industry – with vested interests in continuing to make cheap, illegal copies of software have opposed the legislation.

"Certain ministries have been told to pirate as much software as they can, so that when the law does go into effect, they will have everything," one western executive said.

"Mofert has overall responsibility for this issue, but the other ministries are telling Mofert to get lost."

Not all ministries are copying software illegally, and some do recognise proprietary rights.

But Western analysts say that China's ability to provide adequate protection for foreign intellectual property is vital if the country wants continued access to investment and high technology.

GEC-Alsthom in FFr10bn double-deck trains order

By William Dawkins in Paris

THE FRENCH SNCF rail board yesterday placed orders for FFr10bn (£990m)-worth of double-decker high-speed trains with a consortium led by GEC-Alsthom, the Franco-British engineering group.

This is one of SNCF's biggest orders and aims to boost capacity of its near-saturated domestic Train à Grande Vitesse (TGV) routes in the second half of the decade, so cutting the need for new track.

This will be greeted with relief by environmental groups, which have protested against plans to extend the 10-year-old Paris-Lyon TGV line to the Mediterranean. The crowded Paris-Lyon route will be the first to get the new trains.

The double-deckers will take the expected strain on the Paris-Brussels TGV route, two years after it opens in 1993, but will be too large for the UK end of the Channel Tunnel line.

The order comes as GEC-Alsthom is negotiating against Italian, German and Swiss competition for four overseas TGV contracts due to be decided within months, in Canada, the US, South Korea and Taiwan.

The double-deckers will carry 520 passengers, 35 per cent more than existing single-deckers, but cruise at the same 300 kmh as the newest TGVs now in service. Each train includes eight carriages, with a locomotive at each end. The new model will not be much heavier than existing single-deckers and is estimated to have operating costs per seat 15-20 per cent below current models.

The contract includes firm orders to develop and produce 45 trains, with 55 more under option. Other consortium members include ANF Industries, France's second biggest maker of railway rolling stock, and De Dietrich, the French electrical engineering and household appliance group. A prototype is due for delivery in 1994, with three trains a month ready from spring the next year, the target being to complete the full contract by end-1998.

Anglo-Soviet air venture set up for heavy loads

By Paul Betts, Aerospace Correspondent

AN ANGLO-SOVIET cargo airline is being set up to specialise in transporting heavy loads, using the Russian-built Antonov AN124 Ruslan, one of the world's biggest aircraft capable of carrying up to 150 tonnes of cargo.

The joint venture airline involves a partnership between HeavyLift Cargo Airlines, a subsidiary of the UK Trafalgar House group, and the Soviet Volga-Dnepr company. The airline is expected to start operating in June, adding more AN124s to its fleet before this year ends.

The Soviet transport aircraft, equipped with on-board hoist and crane systems to load heavy goods both front and back, with minimum ground equipment, will be used to carry the largest tracked or wheeled vehicles, aerospace and space-related components, oil pollution control gear, building materials and relief supplies for international agencies.

HeavyLift Cargo Airlines operates a fleet of large Belfasts, Hercules, Boeing 707s and Guppy aircraft to transport heavy loads. Last week, it was involved in carrying equipment to combat the big spill off the coast of Genoa.

Soviet officials described the joint venture as "an important contribution to developing Anglo-Soviet trade and economic relations".

The Soviet partner is one of the first joint stock enterprises set up in the Soviet Union. Still ultimately controlled by the state, these new enterprises do not come under the rigid departmental control, enjoying greater operating flexibility.

Volga-Dnepr has been granted the exclusive rights to operate the AN124 Ruslan, originally designed as a military transport aircraft, for commercial use, a Moscow Narodny Bank official said yesterday. The bank is acting as adviser to the project.

The venture would be largely self-financing, with the Soviet company providing the aircraft and the British group the western market outlets for commercial AN124 cargo charters, the official added.

Pakistan renews drive for economic liberalisation

PAKISTAN yesterday announced more steps in its programme of economic liberalisation aimed at scrapping government controls and launching a drive towards privatisation, Farhan Bokhari reports from Islamabad.

Mr Shujaat Hussain, industries minister, said foreign businessmen no longer needed to seek permits to work in Pakistan. They would only need an ordinary visa.

Mr Malik Naeem, commerce minister, announced a new export policy, with fresh incentives for Pakistani businessmen. To boost exports, the government would provide two-thirds of the cost of setting up new institutions for improving workers' training, if business associations paid the rest.

A new export-import bank providing specialised help for Pakistani exporters was announced. A marketing promotion programme would begin soon to train trade attachés serving abroad.

Officials say the government intends to sell off at least one-third of Pakistan's 150-strong public-sector units by the end of this year. The exports drive is aimed at ending Pakistan's $2bn annual trade deficit.

Retail trade surges but trend weak

By Rachel Johnson

BRITAIN'S high streets saw their sharpest increase in business for almost 12 years last month, as shoppers hurried to beat the April deadline for budget increases in excise and VAT, the tax on goods and services.

Retail sales figures from the Central Statistical Office yesterday showed that volumes rose by a provisional 3.7 per cent in March, after a fall of 0.1 per cent in February.

This was the largest monthly rise since June 1979, when there was a similarly unexpected decision to raise VAT.

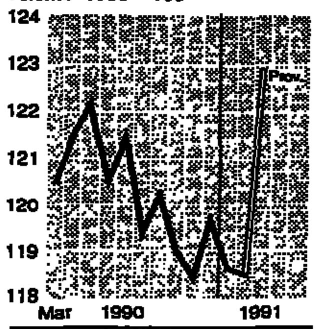
This increase had a particularly marked effect on sales of large electrical goods, televisions, furniture and carpets in the last two weeks of March, according to the Retail Consortium, which says it represents 90 per cent of the industry.

The budget's indexation of excise duties on alcohol led to "excellent" sales of wines and spirits ahead of the price increases on April 1.

However, trends in retail sales remain depressed. In February, a provisional 1 per cent rise was revised into a final 0.1 per cent fall.

UK retail sales

Volume 1985 = 100



EMPLOYERS' SURVEY OF INNOVATION IN BRITISH INDUSTRY

Investment better than most in EC

By Andrew Baxter

A SURPRISINGLY upbeat picture of investment in innovation by UK businesses, in spite of the recession, emerges from a survey by the Confederation of British Industry, the employers' organisation.

According to the CBI's second annual innovation trends survey, 55 per cent of UK manufacturing companies are satisfied that their spending on innovation is adequate to meet future competitive pressures, while 37 per cent think it is inadequate.

The survey contrasts sharply with the tone of last month's House of Lords report on innovation in manufacturing industry, which claimed that British-owned manufacturing industry could almost disappear if the government did not abandon its "hands-off" attitude.

Mr John Banham, CBI director general, said yesterday there was no sense of complacency in its trends survey. But he added that "the facts do not sit well with the conclusions of the Lords committee – translated into plain English they were wrong."

Mr Banham said UK businesses spent £6.5bn on research and development in 1989, a higher proportion of gross domestic product than any other European Community except Germany. The survey showed that on balance this was being maintained last year.

"All is by no means gloom and doom, which is what you might conclude if you were an avid reader of the Lords report," he said.

Two thirds of the 336 companies taking part in the survey spent up to 5 per cent of sales on innovation – which is defined as the development of new products, processes and services – and just over one fifth spent up to 10 per cent.

The survey identified a marked trend downwards in the use of consultants, and a rise in expenditure on joint ventures or co-operation with other companies, particularly overseas. New regulations, especially tougher environmental rules, were seen by some companies as an opportunity, and by others as a threat.

Mrs Fiona Steele, in charge of the CBI's technology and innovation policy, said the survey showed that UK companies saw an increasing competitive threat from EC and other UK companies, rather than from Japan and the US. She cautioned, however, that the survey was intended to identify trends rather than absolute values.

The survey was carried out in October and November, and follows a more limited pilot study of trends in 1989. It is sponsored for five years by National Westminster Bank's Technology Unit.

British Gas pressed to review price policy

By Deborah Hargreaves and Ian Hargreaves

BRITISH GAS faces the prospect of a Monopolies and Mergers Commission investigation if it fails to agree in the next week to major revisions in the formula it uses to set the price of gas for 17 million domestic and small business customers.

The company was last night finalising its response to an 11-month review into the pricing formula. It said it would respond to proposals made by the industry regulator by the end of the month.

The Office of Gas Supply (Ofgas) is apparently planning to turn the review over to the Monopolies and Mergers Commission if British Gas does not respond in the next week. The review of the pricing formula is the first since British Gas was privatised five years ago.

If British Gas accepts Ofgas's proposals, it will face tighter controls on standards of service and a less generous pricing formula, which should bring some easing of energy cost pressures for consumers.

Ofgas is arguing that in the absence of competitive suppliers of gas, it must force British Gas to set public standards, for example on call-out times.

At the moment British Gas can increase prices by the rate of general price inflation, less an efficiency clawback of two percentage points.

The company is also allowed to pass on to customers all increases in the cost of North Sea gas.

Gas users have complained that this structure provides no incentive for British Gas to seek lower-priced supplies of gas.

Tesco chairman paid £1.48m last year

By John Thornhill

SIR Ian MacLaurin, chairman of Tesco, the grocery chain, received total remuneration of £1.48m last year, representing a steep increase on his previous year's basic pay of £345,000.

The pay of the chairman of Britain's second-biggest food retailing chain advanced by £45,000 to £390,000. In addition, however, he received a substantial boost from the inclusion of £1.09m in performance-related incentive payments.

The payments related to a scheme introduced in 1988 which linked directors' bonuses to performance of earnings per share.

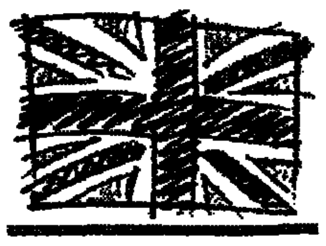
Over the three-year period Tesco's earnings per share rose by 71 per cent, a performance which few other companies in the retailing sector could match.

Four of Tesco's other executive directors benefited strongly from the incentive scheme. Last year, one earned over £610,000, another more than £665,000, and two are bracketed in the £785,000 to £790,000 pay range.

In total, the amount paid out to all directors by Tesco in the year to February 23 1991, increased from £2.24m to £6.74m.

On an annualised basis, however, these incentive awards appear more moderate. Next year the directors will receive only £1.8m between them under the incentive scheme as opposed to the accumulated three-year total of £4.33m they received last year. The growth in Sir Ian's remuneration follows a series of big rises for senior executives at a number of the UK's largest companies.

BRITAIN IN BRIEF



Minimum wage plans dealt blow

Plans of the opposition Labour Party for a national minimum wage were dealt a further blow when the AEU engineering union rejected a second attempt by the Trades Union Congress in two weeks to resolve an inter-union dispute on the issue.

Mr Bill Jordan, AEU president, said suggestions that the pay of skilled workes should be held down was "not only economic madness but will be implemented over this union's dead body."

Failure to find a meaningful compromise could leave the Labour party open to charges that it and the unions have not resolved the pay bargaining dilemmas which were instrumental in bringing down the last Labour administration in 1979.

Managers' pay rises by 13%

British managers' total pay rises slowed only slightly in the January to March period leaving them on schedule for a full year's increase of 13 per cent in 1991. That is the finding of the quarterly executive pay index produced by Noble Lowndes, management consultants and actuaries.

In the first quarter the average total pay for all ranks of executives rose by 3.3 per cent to £71,688. The rise compares with a 3.5 per cent increase for the first three months of 1990 and a rise for the whole of last year of 13.8 per cent.

Young lack basic tuition

One in three primary schoolchildren is not being taught to read and write properly, the schools' inspectorate disclosed.

In a report on the implementation of the national curriculum, the inspectorate found widespread teacher shortages, cramped conditions, few schools with adequate libraries, and insufficient attention paid to instruction in basic reading and writing skills. Only in two-thirds of schools was the teaching and learning of English held to be satisfactory.

The report will fuel ministerial dissatisfaction with "new-fangled" teaching methods. Mr Kenneth Clarke, the education secretary, has asked the Council for the Accreditation of Teacher Education to report to him on the preparation of teachers to teach reading.

Jobless outlook stays bleak

The outlook for employment will remain bleak until 1994, says Business Strategies, a research consultancy, in a report published today.

The consultancy says the jobless total is likely to rise by about 400,000 to 2.4m in 1994, and most new employment opportunities will be in low-productivity areas such as health services.

Royal attack on education

Prince Charles, the Prince of Wales, launched a wide-ranging assault on the failings of the education system. "Here in Britain we seem to get it wrong almost before we have begun", he told a conference to mark Shakespeare's birth at Stratford-upon-Avon.

He deplored the shortage of nursery education, the low stay-on rate among 16-year olds, excessive specialisation at sixth-form level, and the collapse of the old apprenticeship system. He condemned as "almost incredible" current literacy levels, attacked "so-called" education experts for talking "unmitigated nonsense", and expressed astonishment at the absence of Shakespeare from some GCSE and "A" level English courses.

BBC travel change

Most of the BBC's transport services in London are to be contracted out with the loss of 114 staff jobs. More than 40 companies tendered for the contracts which will save the BBC £500,000 a year.

Vehicle maintenance and management car contracts will stay in-house.

Tube staff vote to strike

Supervisors and booking clerks on the London Underground have voted to strike over cuts of up to 1,800 jobs and changes in practices, despite preparations by the corporation to suspend any employee who takes part in industrial action.

The ballot held by the TSSA white collar union will be followed next week by the result of an industrial action ballot of 13,000 members of the RMT transport union working on London Underground over the same issue. The RMT has threatened a series of one-day strikes after London Underground refused to negotiate on job losses and changes in working patterns intended to help reduce an anticipate loss of £92m.

The dispute has erupted at the same time as annual pay talks at British Rail which resume today, and threatens a repeat of the industrial action on London Underground in 1989 at the same time as a dispute at British Rail.

N-warheads 'unsafe'

Britain's latest nuclear weapon, the Trident II warhead, should be redesigned, suggests a draft report from Basic, a London-based think-tank which specialises in critiques of Nato policy.

The study also calls for a halt to all movements of nuclear weapons in Britain while an independent review is made of their safety in storage and transport.

Basic's report draws upon criticism of US nuclear weapons levelled by independent scientific assessors over a year ago, and assumes that British weapon designs relate closely to their US counterparts.

Howe joins US law firm

Sir Geoffrey Howe, former deputy prime minister, who resigned from the government last November in protest over Mrs Thatcher's stance on Europe is to join a US law firm, Jones Day Reavis and Pogue, as a London-based consultant on European matters.

Sir Geoffrey practised law for 20 years before entering politics in 1964. He has announced that he will not be standing for Parliament at the next general election.

Geoffrey Howe: leaving British politics.

Britain comes out of shell

Millions of Britons put aside natural reticence to fill out forms for a national census designed to help policy makers and planners shape Britain's future into the 21st century.

The job of profiling Britain, which involves 135,000 data collectors and 23m questionnaires, comes once every 10 years, so the 1991 census will be the last this century.

The questionnaire, which had to be filled in on Sunday, drew fire from religious groups, gay rights activists, academics and feminists as being too intrusive or too vague in its questions. Others feared the information would be cross-checked with tax records or passed on to businesses that could use it for profit.

History waits for a solution to the great mistake

Philip Stephens traces the story behind today's announcement of a replacement for the poll tax

BACK in 1981 when Mrs Margaret Thatcher first pushed for the abolition of domestic rates, Mr Michael Heseltine offered a simple solution to her most pressing concern.

The environment secretary told the prime minister that if her main worry – and that of the Tory party conference – were the high bills faced by little old ladies living alone in large houses, the answer was simple. He would make local authorities give them a big discount.

The rest is history. Mrs Thatcher did not take his advice. Mr Heseltine moved on and then out of the cabinet. The prime minister solved her problem by replacing the rates with the poll tax. Mr Heseltine pushed her out of Downing Street.

Today Mr Heseltine, back at environment under a new prime minister, will outline the details of his plan to replace the poll tax – with a property tax which will give a 25 per cent discount to little old ladies living alone in large houses.

On his announcement rest the hopes of Mr John Major that the government can finally exorcise the most disastrous political misjudgment in Britain's postwar history.

The important details have already emerged; and despite of talk of further consultation, the scheme will represent a firm proposal rather than an option.

Margaret Thatcher ignored advice from Michael Heseltine and went on with the poll tax

At first glance the result looks a neat synthesis of political imperatives and economic logic, though the realistic in Whitehall are still unsure of how strong the joins are.

The tax will be levied on property classified in seven bands according to capital value. Bills will be applied to households – with an assumption they contain two adults – rather than to individuals. The poorest will be exempted entirely. The present system of grant distribution using Standard Spending Assessments will remain, as will draconian "capping" powers to prevent "excessive" spending. There is little talk nowadays of preserving "local democracy".

The economic logic is there in the fact that a property tax restores a relationship between individual wealth and the size of bills. The Duke in his stately home will pay more than the dustman in his council flat. The Treasury, which has always regarded property values as a reasonable proxy for both wealth and income, is satisfied. So too are the politicians who can claim this makes the tax "fair", or at least much fairer than the poll tax. The little old lady, whose income has not kept up with the rising value of her once-family home, gets the 25 per cent discount.

The political compromise, however, reveals itself in a decision to compress and then "cap" the bills which can be applied to the different bands. The government will set the bands nationally along with strict "multipliers" to regulate the proportion of revenue raised from properties in each category.

Most important, the bill for a house worth, say, £1m or more in band 7 will not be more than 2.5 times higher than for the flat worth £40,000 in band 1. So the system will be progressive – about 90 per cent of households will be unaffected by the "cap" on band 7 – but like the present income tax structure only up to a point.

Mr Heseltine hopes this compromise will calm Tory fears that a return to any property tax would automatically create a swathe of "losers" in the south.

The budget switch of more than £4bn of local taxation to the VAT should ensure that average bills across the country should not be much more than £350 a household. The multipliers will prevent councils from loading the burden on to southern Tory voters who have benefited from the sharp rise in property value over the past decade.

Bills for similar properties will not be identical across the country. A three-bedroom semi in London will typically be in a higher band that a similar house in northern Barnsley, so will attract a higher bill. The Treasury thinks it should – incomes are higher in London than Barnsley. But the politicians will control the size of the differential.

It all looks ingenious, and ministers are convinced that it will work. This time, they insist, the Treasury is fully behind the new system. It has been tested on the computers in Great George Street as well as those in Marsham Street. There is even a figleaf for those still wedded to the principle that all should contribute to the cost of local services. Mr Heseltine will argue that the two-person household which the tax assumes will capture 38m of the 42m adults liable to pay.

There is still though one serious weakness. Whatever the initial level of bills, the commitment to the Uniform Business Rate means that any local tax will be highly "geared". A 10 per cent rise in spending beyond that allowed for in government grant would produce a 70 per cent rise in bills. More than one senior minister is convinced that it the UBR cannot survive it its present form. But talk of raising the tax burden on industry is for after, not before, the general election.

● TODAY's announcement of the replacement for the poll tax will signal a Tory bid to fight the second half of the local government election campaign on their own terms – by directing attention at high-spending opposition Labour party controlled councils. Mr Chris Patten, the Tory party chairman, launched a document giving examples of Labour "mismanagement, inefficiency, failure and lunacy".

Belgian move over export bid likely to embarrass London

By Peter Montagnon, World Trade Editor

MANAGEMENT of Cobac, the private sector Belgian credit insurance company, is to recommend to its board this week that it pull out of the bidding race for the short-term credit insurance business of the Export Credits Guarantee Department.

The decision will embarrass the government by weakening the field further, just as the controversial privatisation legislation is scheduled to come before the House of Lords.

Mr Jason Hadick, Cobac's Managing Director, said yesterday that the move reflected doubts about the availability of reinsurance cover for credits to politically risky developing countries. Whitehall policy on this meant British exporters "would be at a structural disadvantage to their competitors," he said.

He added he was "extremely disappointed" by the move earlier this month from Mr Tim Sainsbury, trade minister, to overthrow an amendment to the privatisation bill which would have required Whitehall to provide political risk reinsurance cover for three years after the privatisation.

Without such government cover the newly-privatised ECGD would have to charge very high premiums or sacrifice its rate of return, he said.

Cobac follows Eagle Star to become the second of six short-listed bidders to pull out of the race. With another, Sun Alliance, still considering whether to submit a bid by the April 30 deadline, the field has begun to thin out rapidly.

Export credit bankers say they expect the race to end in a battle between NCM, the Dutch credit insurer, and Trade Indemnity, which dominates the UK domestic credit insurance market.

The Cobac decision will reinforce exporters' efforts to reinstate the three year government reinsurance commitment when the bill comes before the House of Lords.

It comes as big exporters, mount a fresh but discreet campaign to prevent what they see as a concerted effort to withdraw government support for exports to developing countries.

The business of insuring long-term credits will remain a government responsibility even after the privatisation of ECGD's short-term business.

Ulster job laws 'reduce religious discrimination'

By Our Belfast Correspondent

NORTHERN IRELAND'S radical new employment laws were beginning to have an impact on religious discrimination in the workplace, Mr Bob Cooper, chairman of the province's Fair Employment Commission, said yesterday.

Mr Cooper was commenting, following publication of the FEC's first significant religious profile of the Ulster work force, based on monitoring information provided by all public and private sector firms employing more than 25 workers.

The data covers almost 350,000 people employed by 99 public bodies, and 1,758 private concerns and covers about two-thirds of the province's total work force.

The breakdown showed that 61 per cent were Protestant, 33 per cent Catholic, and 6 per cent non-determined.

When the Commission assessed the last 6 per cent, the ratio was found to be 65 per cent Protestant and 35 per cent Catholic.

The Commission estimates the total working population to be around 62 per cent Protestant and 38 per cent Catholic.

Although the figures suggest that the numbers of Catholics in jobs are almost in line with those available for work, the small percentage variation has a significant difference on unemployment rates.

Male Catholics remain twice as likely as Protestants to be unemployed, with under-representation particularly prevalent in senior positions.

Catholics are also under-represented in the public sector, where their reluctance to apply for jobs with the security forces exacerbates the situation.

Mr Cooper said that on a scale of between 1 and 10, Northern Ireland probably rates 5 or 6 in its efforts to provide equality of opportunity in the province's work places.

He added: "The pattern exhibited in this report constitutes a promising base on which to build whatever future action is necessary to promote equality of opportunity effectively throughout Northern Ireland.

"The Commission has already embarked on discussions about the need for affirmative action in those companies where there is evident under-representation of either community."

A Profile of the Workforce in Northern Ireland - A Summary of the 1990 Monitoring Returns (Research Report No. 1). Available from the Fair Employment Commission, Andras House, 60 Great Victoria Street, Belfast, BT2 7BB, Price £5, post-free.

Cathay services to Heathrow increase competition for BA

By Paul Betts, Aerospace Correspondent

CATHAY PACIFIC, the Hong Kong carrier, will become on May 1 the second international airline to offer new services from Heathrow following the government's decision to open the world's busiest international passenger airport to all carriers.

The start of Cathay's daily non-stop service between Heathrow and Hong Kong will further intensify competition for British Airways at its home base of Heathrow.

BA is already facing fierce competition on its lucrative transatlantic services from United Airlines, which started flights to Heathrow this month after winning approval to take-over Pan Am's London services.

A total of ten international airlines, which had been barred up to now from operating out of Heathrow, have so far successfully applied for rights to start services at London's leading airport.

Royal Brunei will follow Cathay next month with a twice weekly service starting on May 7 from Heathrow to Bandar Seri Begawan stopping at Singapore and Dubai.

Virgin Atlantic, Korean Airlines and All Nippon Airways are among other airlines planning to start new Heathrow services this summer.

These services are expected to lead to an even tougher fares and promotion war between airlines vying for passengers at a time when air travel continues to be relatively depressed. Although there have been some tentative signs of a recovery in air travel, airlines do not expect the situation to return to normal growth levels until much later this year.

Sir Colin Marshall, BA's chief executive, warned in a speech in Los Angeles that the airline's passenger volume was not expected to recover to pre-Gulf War levels until September or October. BA's traffic fell 13.2 per cent in March compared with the same month last year.

Mr John Dance, Cathay Pacific's UK manager, said that low fares had not helped to increase the overall size of the market. "The market has in fact contracted and low fares appear to have had no effect so far," he said.

However, Cathay intended to match all the promotions and lower fares offered by BA, although he added: "I hope when we get to the peak season, there will be a bit more sense seen by carriers."

Cathay is revamping its first and business class as part of its efforts to attract more high-paying passengers. The new services will be launched this winter together with a new business class lounge at Hong Kong airport.

Mr Dance said it was important for Cathay to operate out of Heathrow as well as Gatwick to match BA's services.

Heathrow would also give Cathay access to about 50 per cent of the UK market.

Cathay currently flies two daily services from London to Hong Kong but is already considering introducing a third daily flight from London.

TECHNOLOGY

Digital's load gets lighter

While the price of computers has halved over the past five years, the cost of distributing the finished product has continued to rise. Faced with the need to sell twice as many computers just to maintain revenues, computer companies have begun to focus on how they can reduce the cost of their distribution systems.

Digital Equipment, with European sales of \$5.2bn (£3bn) in 1989/90, has halved its distribution costs over the past five years. One way it has done this is by cutting the computers in stock, down from 12 weeks' supply to three and a half weeks.

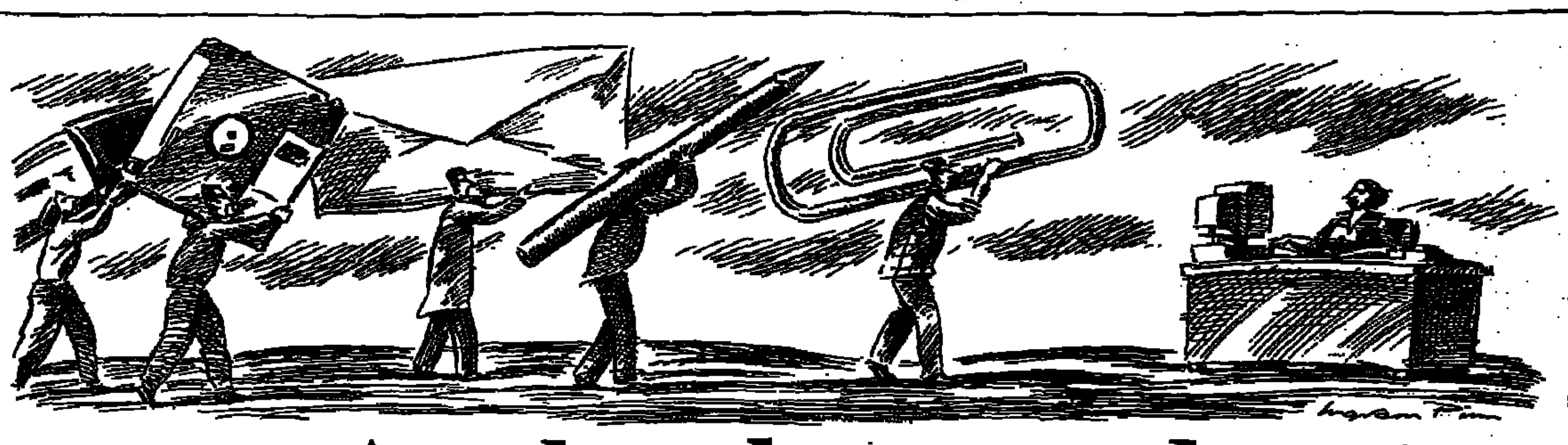
Further ways of cutting the costs have been created at Digital's European distribution centre in the Netherlands. Staff at the Utrecht centre no longer carry order papers around the warehouse. Instead, the warehouse is served by fork-lift trucks fitted with small keyboards, visual display units and a miniature laser gun for reading barcodes.

The day starts with the driver signing on to the computer and taking note of the first instruction of the day. This information consists of a string of numbers which defines the precise location of the computer to be collected, including the aisle, shelf and position of the computer in its box as well as the order for the computers to be stacked, with the most robust equipment at the bottom. When the driver approaches the box he confirms it is the correct one by reading the barcode label on the side with the laser gun.

"The technique eliminates all possibilities for error," says Co Berendsen, manager of the Utrecht centre. An attempt by a driver to collect the wrong box generates a warning signal and if he ignores this he will not receive instructions for his next collection.

Berendsen says that the introduction of radio communications has cut the time taken by the fork lift trucks to do the job by 40 per cent. "Accuracy has also increased and the trucks no longer do journeys around the warehouse without a load."

Lynton McLain



At the sharp end of a supply chain

Dave Madden explains how United Stationers has turned the distribution of its goods into a fine art

Distribution is one of the duller business ghettos – dusty warehouses, broken pallets and diesel oil. But the image, and the reality, are beginning to change.

As Fiat shows off its robot-controlled inventory stacks in glossy advertisements and IBM switches off the lights in its automated warehouse in Greenock, it is clear that this Cinderella operation has a new set of high-tech glad rags.

Britain's high street retailer Marks and Spencer has long appreciated that sophisticated distribution processes are an important part of supply chain management. They influence customer loyalty, product differentiation and profit margins. According to Lee Iacocca, chairman of Chrysler: "The company with the best distribution systems and service level will win all the marbles."

In short, advanced logistics is no longer a luxury. One consequence of this shift is the emergence of a new type of wholesale service company where distribution is just as important as the product that is shipped.

Take paper clips. If you are an office products wholesaler, how do you get retailers to buy such a simple, undifferentiated item from you, rather than from any number of your competitors?

The answer, in the US at least, is "value-added" distribution. United Stationers, the country's biggest office products distributor, can sell and ship a single pencil or one box of paper clips and still make a profit.

The same is true on all 25,000 items in its catalogue, from pens to filing cabinets. And if a customer places an order by 6.00 pm it will be delivered by 9.00 am the next morning to any location in the US.

Not surprisingly, this demands an extensive physical operation. United Stationers, based near Chicago, sells products from around 400 manufacturers to some 10,000 retailers across the US, via 14 regional distribution centres.

This physical network is entirely dependent on a complex computing and telecommunications infrastructure: Amdahl 5995 and IBM 3090 mainframes supported by robotic storage devices from Storage Technology as well as telephone and satellite communications networks. In all an incremental investment of some \$200m (£115m).

United's customers obtain information on the company's inventory via a computer network which connects their machines to United's system of 1,400 PCs. This automates the ordering process and allows clients to see whether United has a particular product in stock.

"Our customers enter upwards of 70 per cent of our orders for us," says Patrick Murray, IT vice president. "We do it in lots of different ways. We talk to everybody's computer. We do it in batch mode, we do it online – however a customer requires it."

Ultimately, Murray expects United's terminals to be on the desks of his customers' customers too, and he intends to apply the same technology to links with his own suppliers.

Ordering is only part of the value-added process. The sooner the retailer knows that United has shipped goods, the sooner he can bill his customer and collect his money, says Murray. Similarly United uses the system to get the latest manufacturers' pricing information to these retailers, so that they can manage their prices too.

Giving retailers such access to and control over the ordering and inventory process, and the imperative to turn orders around in hours, has had serious implications for United's warehousing operation.

Items are not stored in predefined areas. Rather, they are put in the next available bin, as dictated by United's disparate product range: boxes of pencils and desks do not take up the same shaped space. The warehouse map is computer-controlled and the system tracks every individual batch of items.

United can sell and ship a single pencil or box of paper clips and make a profit

Surprisingly, this random binning is not completely arbitrary. The system is able to analyse the inventory and track "hot" products – high moving items – and guide them to where they are most accessible.

When a piece of inventory is manually put into store, staff use radio frequency data entry terminals, complete with bar-coded reading guns, to update the control system directly on line.

The logical extension of all this, says Murray, is to use similar tools and the same bar code in the transportation and delivery process so that a driver can verify that the right carton has been dropped at the right door, and give proof of delivery. United hopes to introduce such an innovation this year.

The same integrated technology feeds United's sales and marketing effort. Its primary marketing tool is a catalogue of products, and United publishes and distributes some 4m copies a year.

But because the catalogue becomes out of date almost immediately after it is issued (with products being added or dropped), Murray has to provide regular updates. He is hoping in the near future, however, to produce an electronic catalogue, with colour pictures, dimension data and moving price information.

At the hub of United's operation is a central IT development and operations staff. Typically this is pared to the bone – 40 people to manage data and voice communications, systems operations and a help desk (there is no computer expertise in the regional centres). In addition, Murray has 100 staff in applications development and product introduction.

The effect of this technological commitment is two fold, Murray says. First, United has grown significantly – it is now a \$1bn company, and one of just four national office products distributors in the US. Second, its technology culture has enabled United to set pioneering service levels.

For example, Murray explains: "We are doing lots of small orders. About 80 per cent of what we sell is not in the same packaging that it came to us in. We don't sell a whole carton of paper – we'll sell one ream. Now the service we provide for our reseller says you go out to each of your customers and you take the orders the way they want them.

"You send the orders to us and we'll package them in such a way that they can be delivered directly to the end user and you don't have to add labour. When we put the label on the box the label says it came from you not from us. Our dealer doesn't have to handle the merchandise at all. The most profitable dealer is the guy who never sees the merchandise, absolutely never sees it at all."

The downside is that higher expectations become institutionalised. Because United delivers anywhere in the US by the following day, and guarantees to be in stock on all of its inventory, that has become the service norm.

Similarly United cannot afford to let up on its technical innovation. Murray claims that the company currently has a lead of six to 12 months, but "the competition is pretty good at copying – so we better have the next thing coming up to keep the gap open. To get the order we've got to be the easiest company to do business with," he says.

Software directive makes users losers

By Alan Cane

Computing policy is undoubtedly too important to be left entirely to the technical experts, but problems arise when officials and politicians try to resolve arguments between differing computer factions without fully understanding the implications of their actions.

Look at the current state of affairs resulting from Brussels' seemingly meritorious efforts over the past couple of years to protect suppliers of computer software from piracy, a mess compounded by the peculiar procedural requirements of the European Parliament.

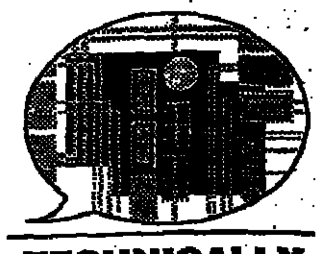
To recap briefly. Two years ago, an EC directive was drafted with the aim of harmonising measures to outlaw software piracy across the member states.

It specifically forbade unauthorised reverse engineering – analysing a piece of software to understand what its does and how it does it. That proposal was flawed in that while reverse engineering is used by software pirates, it is also a key technology for computer manufacturers. They need to be able to attach their equipment to that of their competitors; computer users have to be able to modify and extend their existing software.

It is unlikely the authors of the draft fully understood the implications of their work. The directive suited PC software suppliers and the larger manufacturers – namely IBM and Digital Equipment – but outraged their smaller competitors and customers. The competitors, including Groupe Bull and Olivetti, formed a lobby called the European Committee for Interoperable Systems (ECIS); users formed the Computer Users of Europe.

There was a second dimension. IBM and Digital saw the directive as a way of defending their software against the Japanese. The issue became a war or words fought between the US and Japan in the cockpit of Europe.

Commissioners in Brussels and Members of the European Parliament in Strasbourg are by now no doubt heartily sick of the issue. They have been lobbied mercilessly by representatives from all sides of the dispute for the past 12 months.



TECHNICALLY SPEAKING

A compromise solution or "Common Position" was reached in December which proved satisfactory to the software suppliers and the big computer manufacturers, but left ECIS together with computer users across Europe concerned about the legitimacy of reverse engineering for maintenance or to facilitate the interconnection of one maker's computer with another.

These issues were addressed in a series of amendments which came before the European parliament last week. Some 235 MEPs voted for the amendments, 89 voted against and 197 abstained. But under EC rules a minimum of 260 MEPs have to vote in favour of an issue for it to pass.

The directive now goes back to Brussels for final ratification later this year. Some nations – the Netherlands, Italy and Spain among them – are expected to adopt the measures as they stand; France, Germany and the UK will have to modify their existing copyright law.

The overall result is that the big manufacturers and the software suppliers seem to have all they wanted; the smaller manufacturers are discontented but prepared to live within the terms of the directive while users are confused and angry.

What is now likely to happen is a series of court battles in each member state as users squabble among themselves to define the exact interpretation of the directive with regard to reverse engineering. There is still the possibility that new proposals can be put to the Commission after the effects of the directive have been assessed in practice. Perhaps the commission's own drafting mechanism would benefit from a spot of reverse engineering?

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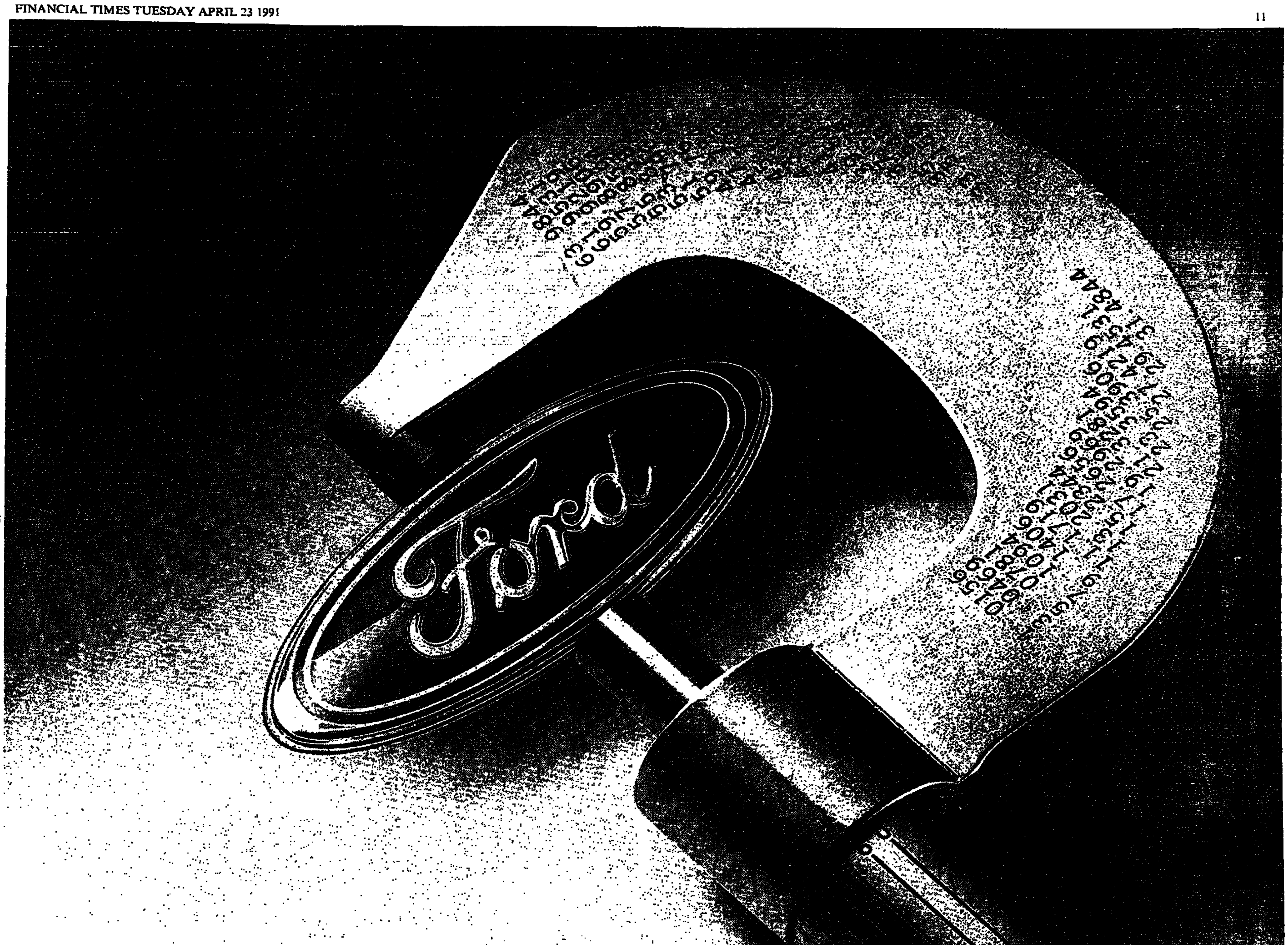

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Frese Ireland Ltd
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Carl Freudenberg
Kunststoffwerk
Weinheim

Himmermann
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Kabelmetal Electro GmbH
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Kelsey-Hayes De España S.A.
Sant Juan Despi

Ketlon (UK) Ltd
Paddock Wood

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Linread plc
Commercial Products Division
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Palmer & Shelley Ltd
Birmingham

Peddinghaus
Ennepetal

Presta
Werk Someflor
Florange

Reinz-Dichtungs-GmbH
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MANAGEMENT: The Growing Business

Capitalists go public

By Charles Batchelor

BRITISH venture capital companies are increasingly willing to consider making direct investments in small publicly-listed companies, according to UK Venture Capital Journal*. This would mark a significant shift in the industry's traditional role and could confuse investor perceptions of venture capital.

The journal signals three reasons for this development:

● The increasing size of venture capital investments in recent years, in particular the industry's involvement in financing buy-outs, means there would be little difference in scale between the funding needs of quoted and unquoted companies. Thirty four per cent of the 1,700 companies with a full stock market listing are capitalised at less than £20m while 70 per cent are valued at less than £100m.

● *There is little difference* between the management style of smaller quoted companies and those remaining private.

● As their portfolios mature more venture capital companies have holdings in companies which have obtained a listing.

Investments in listed companies are potentially attractive because they are more easily disposed of while smaller quoted companies have traditionally outperformed large companies, the journal notes.

On the downside venture capitalists might be hard put to explain to their own backers why they should invest in quoted companies by means of a venture capital company when they could invest directly in the stock exchange. The venture capitalist would also have difficulties gaining the same detailed information from a listed company that he demands when making a private company investment. Despite these drawbacks more venture capitalists are inserting discreet clauses in their fund-raising prospectus which would allow them to make direct investments in listed companies, the journal notes.

Among recent listed company deals it identifies a £14.2m investment in Hunter Saphir, a food group, in the form of convertible preference shares, by 3i, County NatWest Ventures and CIN Venture Managers.

**12 Barley Mow Passage, London W4 4PH. Tel 081-994 8009.*

Subcontracting

Lower overheads and increased productivity

Charles Batchelor on the benefits of off-site production

Elf Holdings, a Slough-based company which supplies audio equipment to schools, is well into a programme to run down its own manufacturing *operations and to subcontract* the work to Remploy, which provides manufacturing services to a wide range of businesses.

Elf will cease manufacturing at its Brighton factory and hand over responsibility for making products such as cassette recorders and public address systems to Remploy's factory in Islington, north London. Some of the Brighton employees will switch to repair and service work but the overall result will be the loss of 10 jobs, reducing Elf's workforce *to 22 people.*

Chris Crump, managing director of Elf, expects that the move to subcontracting will reduce production costs and relieve it of the burden of coping with an uneven order flow. (Remploy produces for many companies so it can control its own workload.)

Elf, which has sales of £2m, *will assemble kits of components* and deliver them to Remploy though it may later arrange for its suppliers to deliver directly to the subcontractor.

Crump, who joined *Elf* a year ago to ginger up a flagging performance, says he considered moving production to Slough but this would still have required him to make a judgment on the size of the workforce he would need to meet fluctuating demand. Sourcing products from the Far East was not an option either because schools frequently require modifications to the standard items Elf supplies.

The complexity of many products has meant that large companies in areas such as automobile manufacture and engineering have long moved to extensive subcontracting of specialised components. Increasingly, smaller companies *are turning to subcontracting*, either to reduce the cost of getting started or to bring down the overheads of a long-established activity.

Small and medium-sized businesses, *those employing* fewer than 500 people, account for no less than 82 per cent of Remploy's customers and 61 per cent of its turnover, the company calculates.

"It is even more important for the smaller company, with its limited resources, to focus on certain activities and subcontract out the rest," says *Brian Small, managing director* of Ingersoll Engineers, a Rugby-based consultancy.

The present recession, which has made companies even more aware of the need to reduce costs, is providing a spur for more businesses to subcontract out parts of their operations. Manufacturing *savings, together with reductions* in other areas such as premises and stocks can allow businesses to finance the restructuring of their operations from their own resources, says Small.

Frequently the crunch comes when a business decides it needs to modernise its production capacity. Gent, a Leicester-based manufacturer of fire detection and alarm equipment, took a hard look at its metal fabrication shop when it was planning a move to a new factory.

"*We had lots of ancient* small presses and turning machines making rings, contacts, even screws," says Andrew Robinson, *managing* director. "We realised our main strength was electronics so we didn't want dirty, oily activities alongside. In addition our tooling was getting old and it would have taken a big investment to replicate."

Gent, which has sales of £24m and which forms part of RTZ Corporation, shed most of its metal fabrication activities. The buy-in value of the abandoned components was only £500,000 a year and the profit improvement was less than £100,000 but the saving in terms of the "distraction value" to management of these *peripheral activities was significant*, Robinson says.

But there are further considerable benefits to be gained from buying in or subcontracting parts of a company's activities:

● Deciding to buy in rather than make can have an important impact on the market-awareness of a company, argues Brian Small. Companies which make a fetish of manufacturing all or most of the components required are less likely to be oriented towards the needs of their customers.

● *Small businesses may be* able to improve quality control by handing over responsibility for manufacturing to a large, more sophisticated subcontractor. "If something goes wrong Remploy's quality control can pick it up," says Robert Belcher, managing director of Manrose Manufacturing, a supplier of domestic fans. Both Remploy and Manrose's supplier of plastic mouldings have obtained BS5750, the main UK standard for quality control, but Manrose itself has yet to qualify. Increasingly, *customers are requiring suppliers* to conform to this standard.

● A subcontractor can help a customer even out uneven order flows and hold-ups in the supply of components. Hayward Tyler *Fluid Dynamics*, a Luton-based manufacturer of specialised pumps, has subcontracted out fabrication and plating operations accounting for 5-10 per cent of total activities as part of a far-reaching restructuring programme. Hayward Tyler employs 250 people, down from 440, and has sales of £20m.

"This will give us flexibility," says Roger Harrop, chief executive of Hayward Tyler and of its parent company, Sterling Fluid Systems. "It will be easier to switch off a subcontractor than our own people." The company's plating shop had anyway only been used for three days a month, he adds.

● Sub-contracting can also improve a company's cash flow. Instead of paying weekly wages to the shop floor workforce the company moves to paying the subcontractor on 30 *or 60-day terms. The company* can also set the cost of the subcontractor's services immediately against profits whereas investment in capital equipment usually takes place over a number of years.

But the decision to subcontract out parts or even all of a business's manufacturing operations can be highly charged. Some companies believe the benefits of subcontracting outweigh the loss of total control of their activities. Others are sensitive about admitting that they are sticking *their own label on someone* else's product.

Production specialists say that before considering whether to buy-in rather than make a particular item managers must decide which activities are core to their company's survival. High value items and products which involve confidential design features and manufacturing techniques should always be made *in-house, says James Byers of* Ingersoll Engineers. Stock items such as nuts, bolts, bearings and washers, or loss-makers essential to the company's range should be contracted out.

In addition, managers must be prepared for a short-term disruption of production when they subcontract work out. "We had a few teething problems in the first six months," says Gent's Andrew Robinson. "It was not easy to get someone else to make items which our own skilled workers had been making for 20 years."

Managers must monitor the relationship with the subcontractor very closely. One start-up business which subcontracted out the plastic injection moulding on which it depended was set back for a year when it was forced to replace a large number of products which customers returned *as being faulty*. "We assumed there would be someone at the subcontractor who had an overall view of the project but there wasn't," says the company's executive director.

But the difficulties do not always lie with the subcontractor. Companies are frequently unrealistic in their forecasts of production volumes, says Edward Selby, business manager of Remploy's southern region factories. Managers sometimes misjudge the market for their product but they may also deliberately exaggerate volumes to negotiate a keen price from the subcontractor.

Nor is it unknown for managers to order wildly excessive volumes of raw materials. "If a customer thinks his product will sell for a number of years he buys a massive quantity of raw materials. If a juggernaut pulls up outside your door with three years' worth of materials *it is difficult* to tell the customer you can't let them in," Selby explains. Subcontracting should not be seen as an easy way of disposing of the complexities of running a manufacturing operation, the experts warn. But properly handled it can have a significant impact on costs and on the ability of a smaller company to service its *customers.*

Andrew Robinson: when it moved to new premises, Gent decided to shed most of its metal fabrication activities

Clubbing together in a local network

Local authorities should be required to assess the economic impact on small and medium-sized businesses of all policy proposals they make. This is one of the recommendations made in a study* of local support networks carried out by accountants Coopers & Lybrand Deloitte and Business in the Community.

Councillors and local government officers should be encouraged to think through the impact of their programmes on local firms with the aim of reducing the burden on business.

The models for this suggestion are the economic impact assessments required by the European Commission and the UK government on draft legislation.

A first step to building a healthy local business environment is to identify key players in the community, the study says. These would include the local council, businesses, the Training and Enterprise Council (Tec), enterprise agencies, chamber of commerce and higher education.

These organisations should agree the outline of the future economic development of the area and *identify their role in* achieving it.

Enterprise agencies should be best placed to counsel small businesses; the chamber could provide information on continental European markets; while the local authority economic development unit might have details of sites available.

The availability of information about local business support also needs to be improved, the report says. Businesses requiring assistance should be able to get help by making not more than two telephone calls. *Many organisations* advocate the grouping of different help organisations under one roof but the development of information technology makes this less necessary, the study argues.

However, the use of information technology between providers of business support is patchy and compares unfavourably *with the systems* in use in continental Europe.

The study urges better publicity about business support groups through the publication of directories and free magazines. The local authority also has an important role to fulfil in promoting a positive image of the area.

As a next step Business in the Community has set up a target team to investigate good practice in other European countries which could be applied in the UK.

**Local support for enterprise. Available from Peter Vernon, Coopers & Lybrand Deloitte, Hillgate House, 26 Old Bailey, London EC4M 7LP. Tel 071-583 5000. Free.*

Charles Batchelor

In brief...

■ The Loan Guarantee Scheme, under which the government guarantees 70 per cent of the value of loans to small businesses unable to *provide normal security*, is to come under scrutiny. The Department of Employment has commissioned a private consultancy to evaluate the scheme which has backed *27,900 loans* worth £890m since 1981.

■ William Stevens, 26, has been appointed secretary general of the European Venture Capital Association (EVCA), an organisation which promotes the interests of venture capital in Europe.

Stevens, a Belgian and a *graduate of the European* School of Management, has worked at EVCA as project manager since 1989. He replaces Yves Fassin who has held the post for the past three years.

■ A new guide to help businesses which are considering setting up in France and executives who are going to live there has been published by accountants BDO Binder Hamlyn. Doing business in France describes financial and legal implications of running the French branch or subsidiary of a firm based in another country. It covers accounting and audit, foreign investment restrictions and tax.

Available from Sally Brunning, BDO Binder Hamlyn, London EC4M 7BH. 54 pages. Free.

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For further details of any or all of the above please contact Jason Elles, Administrative Receiver, Ernst & Young, Apex Plaza, Reading, Berkshire, RG1 1YE. Telephone: 0734 500611. Fax: 0734 507744.

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For further details please contact the Joint Administrative Receiver: Scott Barnes, Grant Thornton, St Johns Centre, 110 Albion Street, Leeds LS2 8LA.
Tel: 0532 455514 Fax: 0532 465055

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Ivy Hill Hotel

Margaretting, Nr Chelmsford, Essex

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Freehold Price on Application

Furze Hill Restaurant and Conference Centre

Margaretting, Nr Chelmsford, Essex

2 storey Victorian mansion. 120 cover restaurant. 200 cover conference/banqueting suite. Office accommodation. Swimming pool and tennis court. Ample car parking. Large grounds adjacent to Ivy Hill Hotel. Turnover to April 1990 £639,525 ex VAT.
Freehold Price on Application.

Please contact Timothy Gooding in the Hotels Department of Christie & Co's Ipswich Office tel: 0473 256588 or alternatively, Paddy Jeffries in the Corporate and Acquisition Division, London Office, tel: 071 799 2121

CHRISTIE & Co CORPORATE & ACQUISITION

On the instructions of [illegible] Joint Administrative Receivers of [illegible] Ltd, Christie & Co [illegible]

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Tel: 0473 256588. Fax: 0473 230071.
Alternatively contact Paddy Jeffries, Corporate and Acquisition Division, Christie & Co., 50 Victoria Street, London SW1H 0NW.
Tel: 071-799 2121. Fax: 071-222 0081.

CHRISTIE & Co CORPORATE & ACQUISITION

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For further information contact the Joint Administrative Receivers, Barry Mitchell and Stephen James, KPMG Peat Marwick McLintock, Marlborough House, Fitzalan Court, Fitzalan Road, Cardiff CF2 1TE.
Tel: 0222 462463 Fax: 0222 481605.

KPMG Peat Marwick Corporate Recovery

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Jade Interiors Limited
Quodeck Limited
Key Components Limited

(All in Receivership)

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THE BUSINESS SECTION ALSO APPEARS ON PAGE 28.

ARTS

Snowy wastes focus the mind

William Packer on the Canadian exhibition at the Barbican

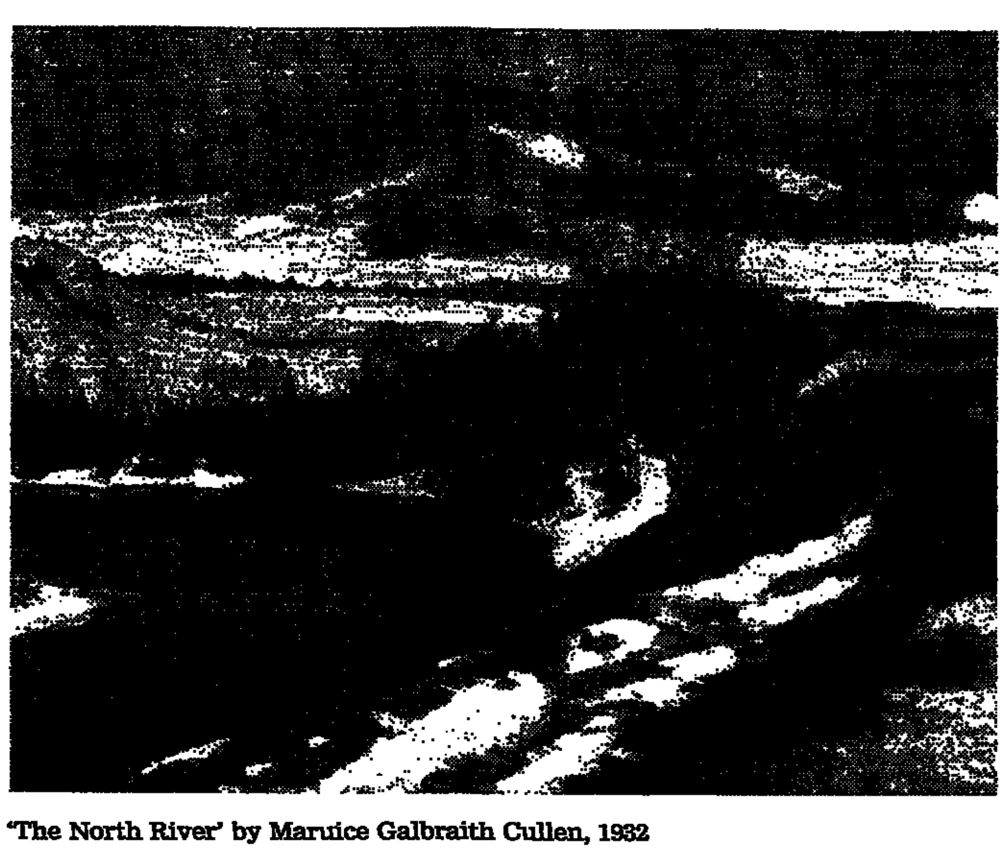
The True North is the self-consciously evocative, not to say portentous title of the exhibition that now fills the upper tier of the Barbican Art Gallery (until June 16: sponsored by *The Daily Telegraph* and Air Canada). But while its sub-title, "Canadian landscape painting 1896 - 1939", might well give us pause, with thoughts inevitable of something more frozen, dull and provincial than exciting, for once the more hopeful expectation is not disappointed. As is so often the case with national schools, Canadian painting has been for far too long too well-kept a secret, to the general loss. What the Barbican now offers us is quite simply, within its own terms, as intriguing and physically enjoyable a show of well-made, honest paintings as we could wish for.

The study of art is littered in paradox, not the least of them that which suggests that the more national, even local the work might be, the wider its general interest and significance. So steeped are we in the idea of Paris as the very heart of modernism through all its earlier phases, that we too easily accept that franco-centric reading at its own self-valuation, seeing everything else as but second-hand, second-best and provincial. But, paradox again, Paris was indeed at the heart of things, and artists came from across the world to see and respond to what was being done, and measure their own art by its standards.

The traffic was ever all ways, and in the first decades of this century many of these expatriates clearly held much in common in that was quite distinct from Paris. The more worldly and knowing, the more true to themselves they were. The Canadians were no exception in this, but they might as well have been Scotchmen or Scandinavians, Spaniards or Mexicans, Americans or even Japanese. The mistake was only to forget, or rather discount the fact that artists went on working wherever they were, thinking of home when they were in Paris, and quite often remembering Paris when they were home.

But while this question of national self-identity is common-place, it is true that it has concerned Canadians to a peculiar degree. The looming, over-bearing presence of the US, the sense of existing along a narrow southern fringe with, at their back, the immense wilderness stretching endlessly away to the Farthest North, has always concentrated their minds wonderfully. In their artists it must surely account for the often self-consciously exhortatory quality of their writings, urging each other towards a position that is truly Canadian; for the constant groupings and regroupings of clubs and societies; and above all, for the epic and celebratory aspect of so much of the work in this exhibition. This last especially is a quality held in common with certain of the contemporary Scandinavian and Icelandic painters, but here so much more forceful and intense.

The show begins with the work of the young artists who were in Paris well before the turn of the century, where they they were able to respond directly to impressionism in its later moods and phases, and to early developments in post-impressionism. These are not the most dramatic images, but their accomplishment and sophistication are incontestable, two views of 1906 by Maurice Cullen, across the St Lawrence river to and from Quebec, as subtle and exquisite in their suggestive tonality as any Monet, and the most beautiful in the entire show. Suzor-Coté, Clarence Gagnon and James Morrice, make up this first most distinctive and distinguished group.



'The North River' by Maruice Galbraith Cullen, 1932

But the best known group, and indeed central to the whole study of Canadian painting in the early 20th century, is the Group of Seven, which came together informally in the 1910s and formally constituted itself just after the Great War. With certain individual artists loosely associated with it, such as Tom Thomson who died in 1917 and, much later, Emily Carr, it addressed itself consciously to the landscape not merely as a visible phenomenon, but as a moral force.

In the work of all the Seven: Harris, MacDonald, Lismer, Jackson, Varley, Johnston and Carmichael, the landscape takes on an almost mystical presence, not personal exactly but alive in its physicality, the space across the lake, the form over the mountain febrile in definition, fraught with feeling. Cloud, mountain, lake and forest alike are simplified and celebrated almost as symbol and totem, the individual tree or rock itself become a monument. But there is rather more to it than simple symbolic signification. The works are beautifully painted, and with a raw but contained energy in the drawing, and rich paint on the surface. Landscape, image and experience alike are beautifully observed, realised and felt.

As much is true of the work of Tom Thomson, perhaps more so, which is as impressive as anything here, though shown separately by the accident of his early death. If the exhibition does nothing more than establish his wider reputation, it will have been more than worthwhile. The show is rounded off by the later work of those artists who continued, by Emily Carr's overt symbolism, by younger artists such as Charles Comfort, and by perhaps the most idiosyncratic and particular of them all, David Milne, whose delicately mannered touch exquisitely combines any number of modernisms, from impressionism on.

Back to the Seven for a moment, Arthur Lismer and Frederick Varley were both from Sheffield and their work is the subject of a coincidental exhibition, *Our Home and Native Land*, organised by the Sheffield City Art Galleries, which comes to Canada House next month (May 3 to June 18). Showing them as it does in depth, it is a necessary pendant to this Barbican exhibition. *Un-Natural Traces*, which fills the Barbican's lower gallery, is a complementary show of current Canadian art.

Prokofiev symphonies

ROYAL FESTIVAL HALL

One of the most interesting features of the current "Russian Spring" series on South Bank is the programming on two weekends of all seven Prokofiev symphonies. This is much rarer than it ought to be; and even individually, the fortunes of the symphonies are mixed – the First ("Classical") and Fifth are played a lot, the Sixth slightly less often, and the remaining four very little.

In addition, the chance to hear the seven given in chronological order, as the two BBC Philharmonic weekends allow, tells one a great deal not only about the development of an important composer, but much that is central to the whole notion of a "Russian Spring" in music. For, while Prokofiev may not have been a revolutionary composer in any committed ideological sense, it is in his brilliant, audacious, and copious musical outpourings that we come to appreciate most fully the trends of the immediate pre- and post-Revolutionary period.

The BBC Philharmonic under Edward Downes played the "Classical" and the Second on Saturday evening (separated by Nikolay Demidenko's superlatively fine account, technically impeccable, formidable, sparklingly witty, of the First Piano Concerto) and the Third and Fourth on Sunday afternoon (the rest follow, in similar programme divisions and timings, next weekend). The "Classical" (1916-17) is a *jeu d'esprit* indicative of the saucy wit and love of 18th-century forms and counterpoint that would stamp Prokofiev all his life. But from there to the Second is a big, fascinating step; and under Downes's sympathetic and knowledgeable guidance it was immensely rewarding to be able to take it.

The following three works, all scored for gigantic forces, are stepchildren of the repertory; the Second (1924-5), a piece of steel-and-smoke musical machinery unparalleled in Prokofiev's output, is the most neglected and misunderstood of the trio – unsuccessful at its Paris premiere, apt to be dismissively viewed even now.

The title of Mossolov's notorious short ballet, *Iron Foundry*, could with some aptness serve as its subtitle, though in the second movement, a set of theme and variations, there is relief, of a quietly and mysteriously beautiful kind, from the pounding, braying and chains of dissonances (all of which Downes and his orchestra clarified with masterly patience). The Second is not exactly a decorous or tidy piece of symphonic construction (Prokofiev never got round to revising or re-scoring it, as he planned). But in a carefully considered performance such as we heard on Saturday, the wealth of combative, rhythmically intricate, densely vibrant material it contains can knock an audience sideways.

The next two symphonies gained their existence via a different route: both are re-thinkings of existent material, the one operatic, the other balletic, and so it is understandable that both, while no less thunderous at climaxes, should be cleaner and trimmer in their proportions. And both, in their different and more mature ways, seem to mark the most artistically striking point of balance between the "iconoclastic" Prokofiev and the "popular".

Both contain extraordinarily rich and exciting invention: their blends of sounds and harmonies – intense, pungent, and sweepingly lyrical by turns – are like no other I know. The Third (1928) is the symphony that Prokofiev drew from the opera *The Fiery Angel* (which Downes will be conducting – happy news! – at Covent Garden in two seasons' time); the Fourth (1929-30, revised 1947) is an adaptation and extension of material from the ballet *The Prodigal Son*.

Whether or not Prokofiev was a symphonist in the traditionally understood sense is a question that has been hotly debated before, and will no doubt be again; but it seems to me that, particularly in the Third, with its depiction of worlds earthly and demonic, of states of mind "normal" and wildly out of kilter, a discourse of confronted opposites is very much in the fabric of its four movements. While the Fourth does not grip the listener in quite the same way, the diversity of its sound-worlds – comic-pastoral, sparkishly jazzy, and broadly melodic – is even more immediate in its appeal.

I formed the impression, perhaps unjustly, that of all the works on the bill of the first BBCPO weekend, the Fourth had been the one least precisely prepared. There were patches of scrappy ensemble, and it was here that one noticed most often the orchestra's relative narrowness of string tone (the brass played expertly throughout). But in Downes's hands, lack of orchestral inflation was an interpretative feature, and a wholly positive one, of both concerts: while performances of more extravagantly virtuosic, or "Russian", characterisation are easily imagined, those of more musicianly style and substance can hardly be. On to next weekend!

Max Loppert

Osud

SEMPER OPERA, DRESDEN

One's heart goes out to Dresden. With blackened stone ruins still peering out of the rubble in parts of the city centre and socialist architecture dominating the rest, the people now face another form of reconstruction – their economy, their livelihood, their self-esteem.

With industry at a standstill, tens of thousands out of work and a growing disillusionment with the promises made at reunification, what priority does music have in people's lives? The city's two main music institutions – the Semper Opera and the Dresden Philharmonic Orchestra – will survive, but much of the cultural substructure will not. The first night of *Osud* was less than three-quarters full. That says less about the Dresdeners' lack of curiosity (or about ticket prices, which are still extremely low), than that they have other preoccupations in these hard times.

Osud marks the end of an era: it is Joachim Herz's last production in Dresden. He has worked there in comparative obscurity for the past ten years, but his production style and cantankerous personality have made him superfluous to the incoming artistic team led by Christoph Albrecht. Herz's decision to take the Saxon state government to court over the ending of his contract makes a sad spectacle.

Osud illustrated two classic traits in postwar German opera production – a natural animation of the stage, releasing the inner impetus of the music, which is Herz's inheritance from Walter Felsenstein; and a congenital tendency to over-interpret. Act one was beautiful. Reinhart Zimmermann's permanent set consisted of a gently stepped wooden platform, which together with Eleonore Kleiber's costumes preserved the period charm of Janáček's setting. Behind lay a wall of large slanted mirrors, reflecting the stations in Zivny's relationship with Mila – the first rapture of eyes meeting, the exchange of roses after one of Zivny's concerts. But the chief distinction lay in Herz's choreography of the spa scenes – the sedate bourgeoisie, the carefree couples, the brood of schoolgirls – so that everyone on stage was an individual, without a trace of the artificial movement that has become synonymous with Herz's successors at the Komische Oper.

The domestic setting of Act two was suggested by little more than a settee, a kitchen dresser and a precipitous flight of stairs. Here Herz depicted the interlocking pressures on Zivny – mother-in-law, creative crisis, marriage strains, alcohol problem – through a series of equally convincing vignettes.

Having respected Janáček's awkward but viable dramatic outline thus far, Herz then made a complete mess of the final act. Zivny's tortured solos were transposed to the beginning, as he wrestled with skeletons of the past (bombed-out buildings, machine-gunfire and the usual German militaristic clichés) in an attempt to reactivate his creative inspiration. After a shortened conservatoire scene, with Mila reincarnated as the impressionable student Souckova, Zivny ended up in a mental clinic. For anyone who saw the ENO and Dusseldorf stagings in the mid-1980s, both of which were faithful to Janáček's original, Herz's solution was nothing more than a piece of interpretative hack-work.

No such reservations about the musical performance, which was consistently inspired. The rhythmic buoyancy and clean, light-fingered articulation of the orchestral playing under Hans Zimmer showed that the Staatskapelle can be as idiomatic in Janáček as they are in Richard Strauss. Zivny was sung by Michael Rabsilber, whose pointed Germanic high tenor and sensitive acting made him a near-ideal interpreter. In spite of being handicapped by dark glasses and a spooky white cape, Kerstin Witt as Mila's mother acted the disintegrating old harridan to the hilt. But the chief glory of the performance lay in Vlatka Orsanic's Mila, a vibrant, radiant soprano who phrased her soaring lines with moving eloquence.

Andrew Clark

Robert Wilson's 'Night before the Day'

Paula Deitz on the American director's latest presentation: a retrospective exhibition of his work together with his latest production, Ibsen's 'When we Dead Awaken'

Robert Wilson, the theatre director, writer, designer and artist, was born in Waco, Texas, lives in New York City, and has preferred to work in Berlin, Paris and other cultural capitals of Europe. During the past season, though, Boston and Cambridge have provided the artist, who will be 50 this year, with two opportunities for world premieres that will travel across the country. They mark a new stage in his career.

Wilson's stock-in-trade is to give concrete form to a combination of visionary images and gestures gleaned from daily observation. Placed in a theatrical, indeed operatic setting, these fragments are made to cohere by a third ingredient – the attention and imagination of his audience.

In many ways, he is closer to Wagner than Ionesco, for though the absurd may be buried in the material, it is the epic themes and variations, repetitiously unfurled during long performances like those of *Einstein on the Beach*, that shape the disjointed parts into a memorable whole. And even where a performance may lag, there is the architecture of the set and his painterly use of light that make the experience more than just a worthwhile representation.

At the Museum of Fine Arts in Boston, *Robert Wilson's Vision*, the first retrospective of the artist's work in a decade, is as much a performance as an exhibition. And across the Charles River in Cambridge, the American Repertory Theatre at Harvard premiered Wilson's production of Henrik Ibsen's last play, *When We Dead Awaken*, which will now be moving with the exhibition to Houston, Texas, and, one would hope, to other cities here and abroad.

As is often the case, an outside discipline can channel creativity into unusual depths, and here an 1899 play (Wilson usually writes his own scripts), whose symbolist themes are compatible with Wilson's techniques, has given the director a chance to cut loose in amazing ways. Not the least of these are the inclusion of some hauntingly beautiful blues songs, composed and sung by tap dancer Charles "Honi" Coles, sometimes with the whole cast, during the "Knee Plays", the brief performances in the intervals that are the joints between the acts. Both the exhibition and the play are accompanied by sound environments composed by Wilson's longtime collaborator, Hans Peter Kuhn.

In designing the exhibition, a work of installation art in itself, Wilson created a journey through three major galleries that, like any classical drama, suggests the passage of a single day. "The Night before the Day," as he calls the installation, features objects and furniture used as props, drawings, paintings, maquettes and actual sets from his past productions.

The entrance through a long dark corridor sounds like a wind tunnel with distant bird calls and leads to a room the colour of dawn, where, among other objects, his hanging wire mesh chairs and tables are doubled by their perfect shadows on the walls. Such objects as the Japanese-style puppets, used in "Knee Plays" during *CIVIL WarS*, and the glass and neon lightbulb from *Death Destruction and Detroit* are elegant in themselves though somehow denuded of their active stage roles.

More illuminating are the black-and-white drawings of his stage designs that convey with solid and luminously transparent planes the great sense of stage distance he achieves. One drawing, for "A Letter for Queen Victoria," demonstrates how something as simple as the back of an envelope can inspire the diagonals of his stage design. The final gallery, dark as night, is aglow with the moving lights of the grid – like the interior of the spaceship from the climax of *Einstein on the Beach*: being so close to it fulfills an audience fantasy of wanting to be in it.

Having recently seen a more traditional production of *When We Dead Awaken* performed by the Jean Cocteau Repertory in New York, I am convinced that Wilson has given a more thoughtful and penetrating interpretation of this enigmatic play, which Ibsen saw as the epilogue of his previous works. The new translation is by Robert Brustein, the ART's artistic director.

Rubek, the famous but ageing sculptor who attempts to rekindle his creative spark, rejects his young, earthy but boring wife, Maya, for a kind of spiritual meeting with the model, Irene, who inspired his greatest work and who may or may not be alive. The sets of mountainous seaside scenes, with rivers of glass and glacial peaks are realistic enough and make one sense the starkness of the terrain. The "music" of clanking metal and roaring sea evokes a desolate landscape as well. But the constructions, as of a metal cage cum labyrinth where Irene and her keeper, here her inner self, take interminable walks, add to the psychological force of the dialogue.

The sets and costumes recall the sombre beauty of 19th-century Scandinavian landscape and figure painting. Wilson has hewed to the force of the script and each act takes his audience higher into the mountains in a natural ascent to the fatal avalanche. The line from Charles "Honi" Coles' first song – "I was alone when I met her/ Now I wish I was alone" – becomes a good refrain for the play.

★

When We Dead Awaken will be presented by the Alley Theatre in Houston, Texas, May 22 - May 26. *Robert Wilson's Vision* will go on exhibit in Houston at the Contemporary Arts Museum, June 15 - August 18 and at the San Francisco Museum of Modern Art, September 12 - December 1. AT&T is the corporate sponsor.

INTERNATIONAL ARTS GUIDE

TODAY'S EVENTS

AMSTERDAM

Concertgebouw Grote Zaal 20.15 Kyung-Wha Chung and Stephen Bishop-Kovacevich play Beethoven violin sonatas. Tomorrow: Elgar's The Kingdom. Thurs and Fri: Chailly conducts Royal Concertgebouw Orchestra (6718 345)
Concertgebouw Kleine Zaal 20.15 Song recital by Felicity Lott accompanied by Graham Johnson (6718 345)
Muziektheater 20.00 Hartmut Haenchen conducts Johannes Schaaf's production of Die Fledermaus, also Thurs and Sat (6255 455)

BARCELONA

Gran Teatre del Liceu 21.00 Double-bill of Donizetti's Il campanello and Leoncavallo's I Pagliacci, with cast led by Giuseppe Giacomini and Piero Cappuccilli, also Thurs. Sat and Sun: Romano Gandolfi conducts Schubert concert (412 1466)

BERLIN

MUSIC
Staatsoper unter den Linden 19.00 Fabio Luisi conducts Il barbiere di Siviglia. Tomorrow: Swan Lake. Thurs: Zar und Zimmermann. Fri: Rosenkavalier. Sat: Madama Butterfly. Sun: Giselle (2004 762)
Deutsche Oper 20.00 Jiri Kout conducts Gunter Kramer's production of Katya Kabanova with Karan Armstrong in title role, also Thurs. Fri: Trovatore. Sat: Zauberflöte. Sun: Tosca (3410 249)
Philharmonie Kammermusiksaal 20.00 Murray Perahia plays Mozart piano concertos with Berlin Philharmonic Orchestra. Tomorrow: Ensemble Oriol plays Haydn, Shostakovich and Mendelssohn. Thurs to Sun: Dennis Russell Davies conducts BPO (2614 383)

BONN

Oper 20.00 Vaclav Neumann conducts The Bartered Bride with a cast led by Gösta Winbergh, Helmut Berger-Tuna and Graham Clark, also Thurs and Sat. Tomorrow: Julien Sorel, ballet by Youri Vamos with music by Elgar (773667)

BRUSSELS

Palais des Beaux Arts 20.00 Christopher Warren-Green conducts London Chamber Orchestra in concertos by Vivaldi and Bach. Thurs: Jose van Dam sings Mozart and Mahler. Fri: Alexander Rahbari conducts Glinka, Rachmaninov and Prokofiev (507 8200)

BUDAPEST

State Opera 19.00 Anna Bolena, also Thurs. Tomorrow: Manon Lescaut. Fri: Bank Ban. Sat and Sun: Salome
Erkel Theater 19.00 Aida, also Sat. Tomorrow: Rigoletto. Thurs: Coppélia. Fri: L'Elisir d'Amore
Pest Concert Hall 19.30 Howard Williams conducts Pecs Symphony Orchestra. Thurs: Adam Medveczky conducts Hungarian Symphony Orchestra in music by Haydn and Schubert. Fri at the Academy of Music: Ilona Prunyi gives a Beethoven piano recital and Julia Hamari sings Mozart with the Budapest Strings. Sun: recital by Brigitte Fassbaender
Tickets available from central theatre booking office, Andrassy ut 18, and Philharmonic booking office, Vorosmarty ter 1

THE HAGUE

Danstheater 20.15 Four ballets by Elisa Monte Dance Company. Tomorrow till Sun: Netherlands Dans Theater triple bill (360 4930)

COLOGNE

MUSIC
Philharmonie 20.00 All-Mozart programme with Cologne Chamber Orchestra, also tomorrow (2801)
Opernhaus 19.30 The Bartered Bride with cast led by Beatrice Niehoff and Josef Protschka, also Sat. Tomorrow: L'Elisir d'Amore. Fri: Tanz-Forum production of Romeo and Juliet. Sun: Götterdämmerung (221 8400)
THEATRE
This week's repertory includes Goethe's Stella directed by Gunter Kramer, Brecht's Jungle of Cities and Brendan Behan's The Hostage (221 8400)

HAMBURG

Staatsoper This week's repertory is devoted to ballet, with guest performances by the Bolshoi Ballet and a performance of A Midsummer Night's Dream with soloists from the Royal Ballet, Stockholm (351555)

LONDON

MUSIC
Coliseum 19.00 Jerzy Maksymiuk conducts Jonathan Miller's production of Don Giovanni, with Peter Coleman-Wright in title role, Jane Eaglen as Donna Anna, also Thurs and Sat. Tomorrow and Fri: Tim Albery's new production of Peter Grimes with Philip Langridge in title role (836 3161)
Royal Festival Hall 19.30 Vladimir Ashkenazy conducts Royal Philharmonic Orchestra in Tcherepnin's Magna Mater, Roslavets' Violin Concerto and Prokofiev's Alexander Nevsky. Fri: Andrew Davis conducts BBCSO. Sun: Zubin Mehta conducts Strauss with LPO (928 8800)
Queen Elizabeth Hall 19.45 Rossini's Petite Messe Solonelle with National Westminster Choir and soloists including Valerie Masterson. Tomorrow: Hanover Band (928 8800)
THEATRE
This week's shows include Carmen Jones, Simon Callow's lavish period revival of the Oscar Hammerstein musical based on Bizet's opera (Old Vic), Michael Bogdanov's English Shakespeare Company productions of Coriolanus and The Winter's Tale (Aldwych), The Visit, Théâtre de Complicité's stylish production of Durrenmatt's dark comedy (National). Matador, new musical telling rags-to-riches tale of Spain's legendary El Cordobes, starring Stefanie Powers (Queren's) and Pinter's The Homecoming, with a cast led by Warren Mitchell (Comedy). Phone Theatreline: Plays 0836 430959 Musicals 0836 430960 Comedies 0836 430961 Thrillers 0836 430962

NEW YORK

MUSIC
Avery Fisher Hall 19.30 Giuseppe Sinopoli conducts New York Philharmonic Orchestra in Mahler's Ninth Symphony. Thurs, Fri and Sat: Sinopoli conducts Mendelssohn and Respighi. Tomorrow in Alice Tully Hall: recital by Nadja Salerno-Sonnenberg and Cecile Licad (874 2424)
DANCE
Metropolitan Opera 20.00 American Ballet Theatre's new production of Coppélia choreographed by Enrique Martinez. Season runs till June 22, with performances every day this week except Sun (362 6000)
THEATRE
This week's shows include Other People's Money, Jerry Sterner's expertly crafted play about the efforts of a New England community to protect itself against an unscrupulous Wall Street takeover specialist (Minetta Lane), Haunted Host, Robert Patrick's play about a Greenwich Village writer who is haunted by the memory of his young protege and confronted by the dead man's double (Actors Playhouse), I Hate Hamlet, Paul Rudnick's comedy about a young television star who is cast in the title role of a Shakespeare-in-the-Park production (Walter Kerr) and Gypsy, award-winning production of the musical with lyrics by Stephen Sondheim and the original choreography by Jerome Robbins (Marquis). Ticketron (246 0102) answers inquiries and sells tickets

PARIS

Opéra Comique 19.30 Final performance of La fee Urgele, 18th century musical entertainment with words by Charles Favart and music by Duni (4286 8883)
Théâtre de la Ville 18.30 Une Journee Blanche, new ballet choreographed and danced by Carlotta Ikeda and Herve Diasnas, music by Alain Mahe, also tomorrow. Fri and Sat: La Beaute des Fleurs, choreographed by Pierre Doussaint and Isabelle Dubouloz (4274 2277)

VIENNA

Staatsoper 19.00 Gerd Albrecht conducts new production of Schreker's Der ferne Klang, also Thurs and Sun. Tomorrow and Sat: Abbado conducts Khovanshchina (51444 2960)
Musikverein 19.30 Vienna Virtuosi play Mozart's Clarinet Concerto and HK Gruber's new cello concerto. Fri: Jean-Claude Casadesus conducts Orchestre National de Lille. Sat and Sun at 11.00: Horst Stein conducts Vienna Philharmonic. (505 8190)

WASHINGTON

Kennedy Center Concert Hall 19.00 Mstislav Rostropovich conducts National Symphony Orchestra in Prokofiev programme. Thurs and Sat: Yan Pascal Tortelier conducts Ravel and Berlioz (467 4600)

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Tuesday April 23 1991

The price of British gas

ONE OF the most important moments so far in the short history of regulating Britain's privatised but still over-mighty utilities is almost upon us. British Gas is in the final stages of negotiations with its regulator, the Office of Gas Supply, to determine the formula which will set the prices paid by 17m domestic gas customers from April 1992.

The Ofgas review of domestic prices began in June of last year and has been a wide-ranging affair. It needs to be; last year, gas prices went up twice – by 7.5 per cent in March and by between 3.3 and 3.7 per cent in November.

These increases were justified under the current formula, which links the price of gas to the retail price index, minus "x", plus "y", where "x" is a 2 per cent efficiency factor and "y" is the cost to British Gas itself of obtaining raw fuel.

It is to be hoped that Ofgas, with the help of two external accountants, is taking a robustly sceptical view of both the "x" and "y" factors. Although the British Gas publicity machine has been active in recent months in presenting the results of its own customer surveys, there remains a suspicion that this private sector *near-monopoly still needs* to shed more than a few pounds in weight. It has not, to take just one example, been driving particularly hard bargains on the pay front.

Searching inquiry

As for the cost of British Gas's raw materials, there are also good grounds for searching inquiry. The company's dominance of the retail market does not necessarily give it the strongest possible incentive to obtain the lowest cost supplies and there is, at the very least, room to question British Gas's efficiency as an operator of its own gas fields. At the point of privatisation, it was impossible for any outsider to unscramble British Gas's accounts to make a fair judgment on these points. Ofgas will have let down gas customers very badly if it has failed to sort out the figures.

Ofgas has also served notice that it intends to reconsider the appropriate return for British Gas, the value of its assets and new ways in which it can *be held accountable* for standards of service.

The next stage of this lengthy process, due in the *next week, is that* British Gas has to inform Ofgas whether it accepts the regulator's proposed pricing formula. If it does not, the matter is automatically referred to the Monopolies and Mergers Commission for detailed examination.

MMC involvement

There is a very strong case for MMC involvement, not least because it would expose to public scrutiny the detail of Ofgas's case and British Gas's response. *One of the biggest* problems caused by the misjudged privatisation of British Gas, which was allowed to keep most of its monopoly power, is that the kind of public disclosure which was to some extent required of a nationalised industry can now be resisted on *grounds of commercial* confidentiality.

As the rules stand, however, British Gas can avoid a bruising run-in with the MMC simply by agreeing to the Ofgas plan. It is to be hoped, in that event, that one element in the Ofgas proposal is that there should be full public exposure of its analysis. There is no point in Ofgas setting itself up as a policeman of the meter man's *punctuality if its* essential calculations about prices are lost in obscurity.

Nor should the politicians *who designed the* regulatory regime in gas make the mistake of thinking that these are matters of little interest to voters. Energy prices are uncontroversial so long as they are relatively stable. But the new gas price formula will cover the period from 1992 to 1997. It will only take a modest oil and gas price shock in that period to turn the arcane algebra of Ofgas into front page news.

Regulating a company as powerful as British Gas is not easy, and so far Ofgas has had only modest success in stimulating competition in the industrial gas market. For domestic customers, Ofgas looks like remaining the only protection against the abuse of monopoly power. That is why its next move on prices needs to be rigorous and visibly so.

Listening to employees

ANYONE seeking a lesson in the most productive ways to manage workers would be unlikely to look first to Britain. Failure to engage the skills and commitment of workers effectively has been a long-standing problem for industry. In the 1970s, the symptom of this British disease was industrial action. In the 1990s, it is unemployment caused by *inability to contain wage* growth.

Mr Michael Howard, the employment secretary, nonetheless believes Britain has a story to tell. He yesterday praised companies for promoting employee involvement. Instead of following rigid European practice, companies were finding their own ways of raising productivity through worker involvement.

Mr Howard's point is that British companies are already addressing this tricky issue without having to be forced to do so by the European Commission. He suggested that the Council of Minsters accepts a vaguely worded endorsement of worker participation in *place of the Commission's draft* directive on European works councils. This would avoid large employers having to establish European consultation mechanisms.

Part of Mr Howard's motive was no doubt political. The government has played on its resistance *to what it regards as* the Commission's plan to smother the Single European Market in the red tape of the social action programme. Mr John Major has less taste for such public carping than Mrs Thatcher, but Mr Howard believes he is on firm ground, given the undoubted hostility of British employers to the draft directive.

Overblown rhetoric

The political motivation accounts for some of the overblown rhetoric. *Companies* employing more than 1,000 people and more than 100 in at least two EC countries would *no doubt find it irritating to* have to pay for regular pan-European briefing meetings. Many might question their *value, but the directive would* hardly force them into full-blown co-determination.

One reason why the fears appear exaggerated is the long history of the directive. It is a descendant of more ambitious attempts to impose worker participation, including the Vredeling directive of 1980. But its roots are misleading: the European Commission no longer sees itself applying the German model across the Community. Most of today's debate revolves around the entirely valid objective of increasing managerial *effectiveness and corporate* success.

Code of practice

Mr Howard could do more to catch this mood. For example a code of practice on employee involvement has already been drawn up by the Institute of Personnel Management and the Involvement and Participation Association. Mr Howard *should consider endorsing it.*

But such signals of encouragement to employee involvement are the limit of what governments should do. Legislation is not the right way to define or enforce good management practice. This is as true of employee communica*tion as it is of the structure of* company boards or the planning of a production line. Inflexible models of how managers should inform workers will not increase good communication.

Much of this legislative intent at the European level is, *in any case, clearly outdated.* Not only European governments, but US management consultants now preach the virtues of involving employees in production systems and quality control; wise managements keep workers informed and listen to what they say. Japanese team-working methods and quality circles are among the clearest pieces of evidence that worker involvement can bring a financial pay-off.

The market is thus already deciding in favour of involve*ment. Changes in working* methods to suit more complex production processes are already making it more diffi*cult to sustain a clear divide* between managers and the managed. This is something for governments to encourage if they want to achieve economic success. It cannot be imposed through inflexible legislation, no matter how well intentioned.

Martin Dickson on the outlook for the US aircraft maker McDonnell Douglas as it tries to recover from a succession of blows

Into the air with a hold full of hopes

Three sleek new airliners, their fresh paint glinting in the spring Californian sunshine, sit on the "flight ramp" – the very end of the production line at McDonnell Douglas's Long Beach plant – surrounded by a clutter of equipment as workers prepare the jets for final delivery.

They are among the first dozen production models of a wide-bodied, three-engined jet – the MD-11 – to roll off the commercial *aircraft line.* To McDonnell Douglas, these jets, and 34 other MD-11s due for delivery this year, represent much more than routine aircraft *sales. To the manage*ment at Long Beach, where McDonnell makes its civilian aircraft, they provide hope that the chronic prob*lems that have* plagued the plant for years are being solved. And at the group's headquarters in St Louis, Missouri, the sales are a kind of financial poetry in motion: each departing $100m jet brings in huge amounts of cash flow which the company believes will extricate it from a tight corner by the end of this year.

For McDonnell Douglas, the largest defence contractor in the US and one of the western world's three leading civilian aircraft manufacturers, has a stretched balance sheet. In 1990 much more cash – some $400m – flowed out of the business than came in.

Ironically, just when the company *has been basking in* the success of its weapons systems in the Gulf war, a succession of blows has left some Pentagon officials and industry observers questioning whether it could even become a contender for bankruptcy or a government bail-out.

Mr John McDonnell, the company's bearded, 53-year-old chairman and the son *of its founder, says the Cassan*dras are just plain wrong. "We've taken a lot of strong measures to improve cash flow and they are tak-

Even if McDonnell Douglas's finances are now improving, it faces a difficult long-term juggling act

ing effect," he says. "By the end of this year our cash flow will be getting quite positive and our debt will be going down, and it will be obvious to everyone that we're getting in a much stronger financial situation."

But in 1990 the company reported *net earnings of only $306m on reve*nues of $16bn, while at year-end its debts, excluding its financing arm, totalled $3bn, or 95 per cent of its equity. Nor is the quality of its earnings very impressive: some $376m of 1990 profits came from a one-time pensions settlement, while the company is in dispute with the government over military contracts which could eventually mean writing off hundreds of millions of dollars.

The most serious dispute stems from January's decision *by Mr Dick* Cheney, the US defence secretary, to cancel development of the A-12 attack aircraft, a potential $50bn programme *being jointly developed by McDonnell* Douglas and General Dynamics. The two contractors, having already taken large write-offs on the A-12, are now locked in litigation over $1.3bn of progress payments which the Pentagon wants back.

Even if McDonnell's finances are now improving, with a reported profit of $58m for the three months to March 31 this year, against only $2m for a year earlier, it faces a difficult long-term juggling act: its combat aircraft business, which for years has made up for the weak financial performance of the commercial side, is shrinking inexorably as the US cuts *its defence budget.*

The Gulf war is unlikely to bring in much fresh business – apart from a replenishment of the Tomahawk cruise missiles. And while McDonnell remains the leading US manufacturer of combat aircraft, several models – the F-15 Eagle, the Harrier II AV-8B and the Apache helicopter – are nearing the end of their Pentagon production programmes.

The successor to the F-15 is to be chosen by the air force possibly this week in a two-way battle between a Northrop-McDonnell partnership and one *comprising Lockheed, Boeing and* General Dynamics. Worth upwards of $60bn, the contract for the new, advanced tactical fighter, the ATF, is vitally important to McDonnell-Douglas. This month it lost out to a rival Boeing-Sikorsky consortium for the US army's new light attack helicopter contract.

Whichever way the ATF contest is decided, it is clear that McDonnell's future is becoming more dependent on Long Beach and its ability to *develop profitably new generations of* civilian aircraft in competition against the larger, more efficient Boeing and European Airbus Industrie.

Long Beach, in common with rival manufacturers, has a strong order book – particularly for wide-bodied jets – though in recent months the industry has become nervous because *of deferrals and cancellations* by airline customers. But the plant has been an Achilles heel since the Californian Douglas company merged with McDonnell in 1967, losing money for much of the past 15 years.

Its profits record might be blamed in part on the competitive pressures of the aerospace industry, but insiders suggest it results substantially from years of poor productivity and lack of discipline. The plant's management did not have a sufficient grasp on real *production costs, while suppliers com*plained about bureaucracy and inefficiency in the purchasing system.

All these problems were exacerbated in the mid-1980s as Long Beach tried to cope not only with making the aircraft it already had in production – the MD-80 twin-engine jet and the now discontinued DC-10 wide-bodied aircraft – but also with a rush of new developments: there was the MD-11, the successor to the DC-10; the MD-90, a follow-on from the MD-80; the C-17, a new generation of military transport aircraft specially designed for use on short runways; and the T45, a naval training aircraft.

Despite these new ventures, McDonnell Douglas's family of commercial aircraft is less comprehensive than that of Boeing and the developing Airbus fleet. Unlike its two principal competitors, it has no presence in the middle range of the market, but is concentrated at the lower end, with the MD-80, and at the top with the MD-11. McDonnell and Airbus missed a chance to challenge Boeing two years ago by failing to agree to co-operate on new aircraft production. Now McDonnell is understood to be actively looking for an equity partner to buy a minority stake in the commercial jet side of the business.

*Meanwhile, as the company strug*gled to meet its commercial aircraft commitments and programmes, staff levels were rising. At Long Beach, the workforce went from just 12,000 in 1982 to 52,000 in 1989. As it did the experience level of the average worker dropped from 10 years to two. Problems multiplied and the plant's development schedule lagged.

At this point Mr McDonnell, who became chairman in early 1988, decided that the entire group needed a radical overhaul of its management systems. A new executive team, drawn from across the company, was despatched *to Long Beach* last year, headed by Mr Bob Hood. The new management approach aims to improve productivity and customer *satisfaction by stripping* away bureaucracy, pushing greater powers of decision-making down the line, and creating greater motivation and inter-departmental co-operation through the formation of teams. Called Total Quality Management System (TQMS), and inspired by the Japanese, it has been adopted by several other leading US manufacturers.

"We started from ground zero," recalls Mr Hood. Departments were reshaped into teams working on individual products, drawing together people from different disciplines. Management layers were cut from nine to five and the new *leaders were selected* with an emphasis on what Mr Hood calls their ability to "coach and listen" rather than "old-style dictatorial *management*".

Over the longer term, the changes may well prove to be the salvation of Long Beach. In the short term, they produced more confusion, demoralisation and delays. *TQMS was intro*duced gradually and quite successfully at McDonnell's St Louis division, but was imposed virtually overnight *at Long Beach.* Matters became so bad that Colonel Kenneth Tollefson, the air force representative overseeing the C-17 programme, wrote an article in the staff newspaper accusing management of lack of leadership.

Morale at the plant still seems shaky, and union relations delicate, but over the past year progress on the MD-80 and MD-11 lines *does suggest* that the shake-up is starting to produce better results. For example, productivity on the MD-80 improved by more than 30 *per cent in 1990 and* is still getting better. For the first time in its history that aircraft has enjoyed two consecutive money-making quarters, with a *third* coming up.

All this has not saved the MD-11 from some recent embarrassing criticism from Mr Robert Crandall, the chairman of American Airlines, who was unhappy with the first aircraft delivered to his company. Mr Crandall's complaints seem to involve some easily fixable and relatively minor glitches, and American says the problems do not alter its enthusiasm for the MD-11.

A far larger Long Beach dispute, which could have a significant impact on the group's profits and balance sheet, concerns the C-17, which is behind schedule and looks likely to come in over the $6.6bn fixed-price contract McDonnell Douglas accepted from the air force. The air force, claiming that McDonnell is $500m *above the ceiling,* withheld progress payments late last year and Pentagon officials were recently quoted as saying that the project might now be $800m to $900m over budget.

McDonnell, however, reckons the aircraft will come in only $100m above the ceiling. Mr Herb Lanese, the company's senior vice-president, finance, says *the two sides* are working on new figures and insists that "the performance indicators at this time are a lot closer to our numbers than to the air force's".

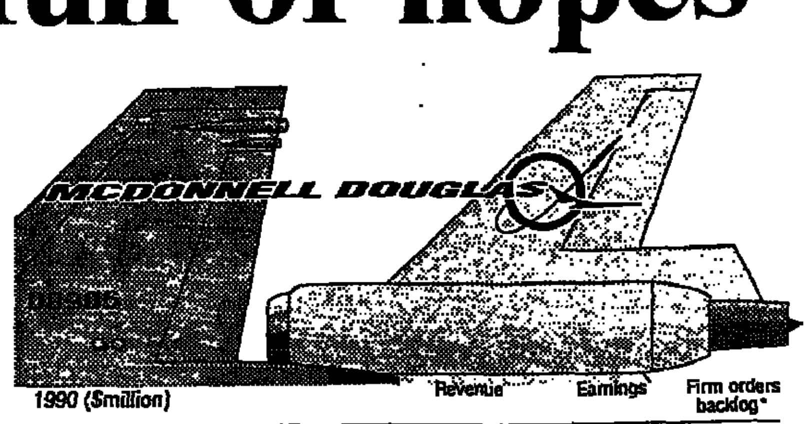
The Pentagon's withholding of $900m last year for work on the C-17 and the cancelled A-12 has contributed significantly to McDonnell's cash squeeze, as has the tightness of the capital markets, restricting cheap access to funds for a company with a low investment-grade credit rating. *But the main factor has been the $3bn* cost of developing the MD-11 – roughly the same as the group's entire equity base.

However, Mr Lanese says the financial picture is on the point of improving substantially and that March probably saw the peak of the company's borrowing needs. At the end of the first quarter McDonnell's debt totalled about $3.3bn, with some $370m of cash on hand, against net equity of $3.5bn. With loan covenants setting a *ceiling of just over* $4bn on total borrowings, *the company still* has a sizeable ability to raise funds.

The improving cash position is due *in part to MD-11 sales but also to* a company-wide savings drive: working capital is being slashed, the dividend has been reduced and capital spending curtailed. The MD-11 production schedule has also been cut – by five aircraft this year, from 42 to 37, helping save on parts and labour costs.

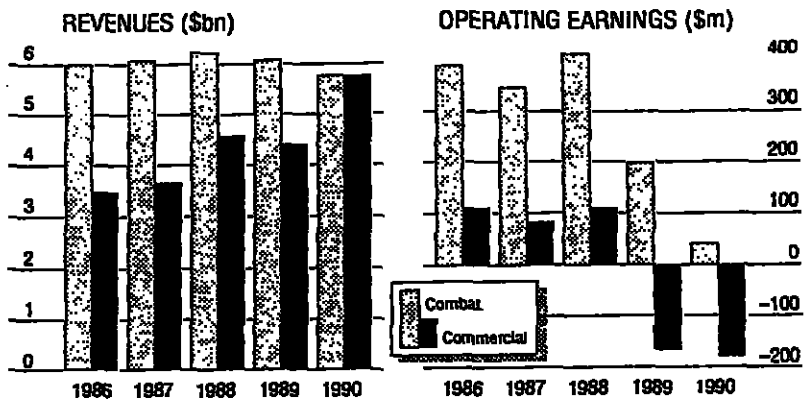
All this does suggest that the direst predictions are overdone. That said, McDonnell's room for manoeuvre will remain tight for the rest of this year, and there are several wild cards – a $500m tax claim, the C-17 and labour issues – which could yet cause it severe headaches.

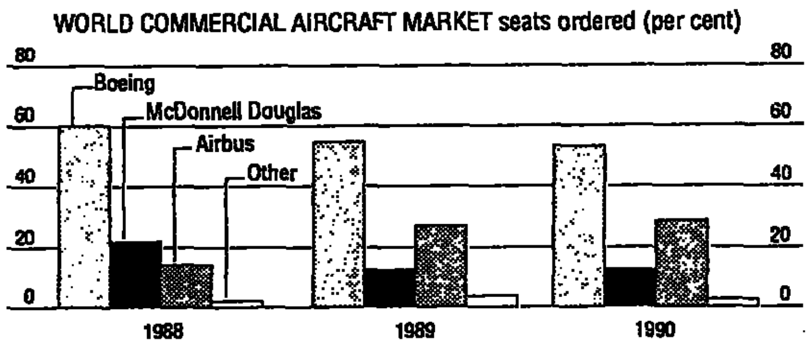
Next year cash flow is likely to turn positive, *but the heat will still be on* McDonnell's management: to improve Long Beach productivity; to find funds to develop the next wide-bodied jet – a stretched version of the MD-11 called the MD-12X which will compete with the Boeing 747-400; and to handle the tricky transfer of resources from fighter to commercial aircraft.



1990 ($million)	Revenue	Earnings	Firm orders backlog*
Combat aircraft	5,830	46	8,174
Commercial aircraft	5,812	-177	25,834
Missiles, space & electronic systems	3,188	167	2,536
Financial services	619	100	
Other	797	49	
Total	16,255	306	36,544

* Unaudited





OBSERVER

Top of the bill

■ *Forget the opening of Miss Saigon* on Broadway. It will be thoroughly upstaged by this year's biggest first night on October 12, bringing the first performance of John Godber's comedy *Happy Families* at the Caxton Theatre in Grimsby... the Questor's in Ealing... the Progress, Reading... not to mention 47 more.

The whole lot are building their autumn season of ama*teur theatricals around the* play, thanks to what used to be called British Telecom which has extended its arts sponsorship into the cut-throat world of amateur dramatics.

Sponsors usually avoid amateurs like the plague. But when consultant James Cook proposed the commissioning of a new play for simultaneous performances by the 64-strong Little Theatre Guild, BT saw the PR possibilities.

The idea has been taken up by 50 members of the guild, which represents the top league of Britain's 12,000 theat*rical groups. In July all the* directors involved will gather at the BT Training Centre to be guided by Godber, who has written *Happy Families* with amateurs in mind – a cast of a dozen, heavily weighted towards women.

The event will cost BT around £50,000, and be repeated in two years time, perhaps with Alan Ayckbourn as the playwright in charge. The sponsor will use the first nights for entertaining customers. You have been warned.

Wrong signal

■ There is an awful lot of humbug *talked about* top executives' pay. Even so the news that Sir Ian MacLaurin, Tesco's retailing superstar, is taking home £1.5m is bound to raise eyebrows.

He is not in the same league as Sir Ralph Halpern, Burton's ex-chief executive, and he has *made a lot of money for Tesco* shareholders. But the problem with such seemingly massive pay increases today is twofold.

They send the wrong sort of signal to a workforce under pressure to squeeze costs. Second, tying management incentive schemes so closely to earnings-per-share growth – perhaps at the expense of balance sheet prudence – can be dangerous.

It is time companies spelt out the terms of their executive incentive schemes in the annual report right from the start. Then bonanzas like MacLaurin's would not be such a surprise.

Programme trade

■ While Manchester United seek stock-market flotation, Sheffield Wednesday, who beat them in Sunday's Rumbelows League Cup final, might turn to the FT Ordinary index to appreciate just how long it had been since they last won a Wembley final.

It was 1935, the year the Ordinary was launched. On Sunday, the index (base 100) stood at 1980.1. We are told that the 1935 Wembley programme cost one old penny. Sunday's cost £3 – a 720-fold increase.

Nipped in bud

■ After excellent vintages for three years running, Bordeaux faces a black year in 1991 as *a result of a sharp bout of frost* over the weekend.

In itself, frost is not all that unusual at this time of year. But the attack last Saturday night fell in parts as low as -7 deg C, and it followed a particularly mild spell which had brought on the vegetation of the vines unexpectedly early.

In consequence, the total Bordeaux vintage this year is already expected to drop by around half, from 800m to 400m bottles. Moreover, not merely will the quantity be down, the quality will also be jeopardised.

Some vineyards will be much worse hit than the average; the harvest in Medoc may be down by 70 per cent, and the vintage in some individual vineyards in St Emilion, Graves, Entre-Deux-Mers and Pomerol may be completely wiped out.

Wine experts, who last year were groping for superlatives to describe the recent run of superb vintages, are now groping for comparisons for an equally disastrous frost.

"Norman feels there should be a Queen's Award for imports."

Hard tug

■ *One person who won't be* at today's annual general meeting of National Westminster Bank – although he probably should be – is John Tugwell who has been handed the unhappy job of sorting out NatWest Bancorp. He is the one banker who knows how bad things really are at NatWest's problematic US subsidiary.

Then again, since he arrived in New York less than a fortnight ago and only five *days before NatWest Bancorp* revealed it lost $191m in the first quarter, perhaps his absence can be excused.

Even by US banking standards NatWest Bancorp has been doing pretty badly, and 50-year-old Tugwell says he has been working day and night since he first arrived. He has rented an apartment on Manhattan's East side and is intent on rallying his 7,500 *troops by being NatWest's* man in the trouble spot.

Parachuting Tugwell into the top spot at NatWest Bancorp is a risk both for him and his employer. Having been involved in the 1977-78 acquisition of National Bank of North America, he is closely associated with NatWest's expensive acquisition strategy in the US. With interest rates falling there, the injection of *yet more of the parent's capital* means Tugwell may be able to stage-manage an impressive turnaround.

If he can, then he's well placed to follow in the footsteps of Tom Frost, NatWest's chief executive, who made his name in the US. But if matters *take a turn for the worse,* Tugwell could face a similar fate to Midland Bank's John Harris. Once viewed as the next chief executive, Harris never recovered from being sent to keep an eye on Midland's disastrous Crocker acquisition in California.

Unlike Harris, who had to work alongside a US chief executive, Tugwell has been given sole responsibility for NatWest's US operations. *It is* make or break time all round.

Concentrated

■ After two Finns had been drinking together for three *days, one suggested it was time* they had something to eat.

"Look", said the other, "did we come here to drink or talk?"

Visionary seeks an equal chance

Lech Walesa, the Polish president, who begins a state visit to Britain today, outlines his hopes for his country's future in an interview with FT writers

Poland's first democratically elected president, Mr Lech Walesa, arrives in London today for a three-day state visit. He is a complex mixture of intuitive vision, political shrewdness, religious conviction, unexpected naivety – and personal charm. It is a combination which helped him play a key role in the collapse of communism, and is now being used to win Poland a place in Europe and woo foreign investment.

Last week in Warsaw he talked to FT correspondents about Poland's hopes and fears, starting with the prospect of 2m unemployed before the year is out.

Q: Will you have to ask Poles for "blood, sweat and tears"?

A: I don't agree with this perspective. Poland can't afford unemployment. It has so much work to do, so many needs. Our problem is not over-production but shortages. We have an educated society but antiquated systems and machines. That's why we need help from abroad. Even if Poland had twice as many people we could not catch up with the west in 20 years. So let foreign business come here, then there won't be unemployment and I can save the country.

Are you saying there won't be unemployment?

No, no. There could be more than 2m unemployed. The point is there should not be any, given the size of our needs.

What will you be seeking in Britain?

I'll be doing some blunt talking. Europe is not Europe without Britain, but there are mistakes in western thinking. Europe fears that we'll take away markets. But I'm convinced there is work for all here in Poland for 10 years just to fill in the gaps in our economy. We should learn to assess our potential on a Europe-wide scale. Look at Nowa Huta (a big steel works). Its pollution is destroying Krakow. Shouldn't we give up producing steel and buy from France which has non-polluting factories? But then France has to help find work for the 60,000 who lose their jobs.

We allow imports of all goods but the west is not buying ours. Why are we being punished? We could end up like Romania which has nothing but shortages. If we don't find a common language my farmers won't allow the import of food from the west. But this is not what should be happening.

We want to join the European institutions. But Europe is afraid to let us in. Yet, it's so simple. We should all stand at the starting line as if in a race. I'll be on a bicycle, others on tractors, some in cars. Who wins is his affair. That's the thinking we should have – everyone should have an equal chance.

Computers should have a hand in all this. The computer should fire a public starting signal. It should not be a confidential one so that someone gets an unfair lead.

That places a lot of faith in computers. Comecon tried that and failed.

That's true. But the first fruit is always full of worms.

What do European leaders say when you make these points to them?

No one has countered my arguments yet. They may complain that the way I put my views is too brutal but no one has found convincing counter-arguments to my vision of European development.

Do you see these leaders as short-sighted?

No, but things are changing so fast, and they can't take all factors into account. I have a great advantage. I'm not tied to any party. Politicians as a rule are limited by their political affiliations and programmes.

It is said you model yourself on Pilsudski. (Marshal Jozef Pilsudski, who gained enormous popularity by defeating the Red Army at the gates of Warsaw in 1920 and later established an increasingly authoritarian regime in the inter-war years.) Is that right?

No. Of course, I respect Pilsudski. But I'm a different person. Look at the contrast in our achievements. Pilsudski won great victories with enormous losses and people were very enthusiastic. We have achieved an enormous victory over communism without bloodshed – but people aren't happy.

We've achieved so much and so subtly. We've handed Europe victory on a plate, and the opportunity to link all Europe up on a healthy basis. Yet just look what Europe is doing. (At this point the president screws up his face in a gesture of fastidiousness and waves his hands from side to side.) It does not want to get involved ... it hums and haws.

Ashley Ashwood

Lech Walesa: 'My role is forcing people into democracy'

Generations have fought for this great chance. Well, now we have it. The question is, Will we screw it up?

Everything ought to be possible – entry into Nato, into the European Community, everything. But what are we doing? Just waiting for the next earthquake. It's amazing. Incredible.

If there'd been the usual victory with corpses all over the place there would have been enthusiasm.

Somehow everything has changed. It used to be the Germans who did the fighting and the Jews the trading. Now it's the Germans who are fighting for peace, the Jews who are fighting and the Poles who are trading. Maybe that's why things are upside down, everybody is playing unfamiliar roles.

What about the situation to the east?

This is a new era. Of course, new nations and social groups want their freedom. They are casting aside their chains. Take the Czechs and Slovaks. Now they're arguing. But this is just the initial phase. After that they'll start coming together again. Modern economies transcend national boundaries and dangers like Chernobyl are also no respecter of borders.

Five years ago I said that the Soviet Union had only one option – to dissolve itself. But no one took me seriously. I'm now saying that it will dissolve but come together again on new principles, on logical principles.

As for Poland, we need foreign investment because it also gives us security. Having a Frenchman or an Englishman here with his factory is like having a division of troops. You in the west have over-production. You can make money out of our shortages and our stupidity – and we have plenty of that.

We can't just escape in your direction because it is already full up. I want to turn round the escape routes. That's where business can be done. Business should come here rather than wait for people to flee west. Come and set up a factory here. Make money.

Some people say, 'Walesa is selling Poland cheap'. Our people are intelligent but we received our education under communism. We need western help to show us how to do things. We don't want charity or sentiment. We have to be taught in the brutal school of life. The quicker we start the quicker we'll learn.

You won power because the communists could not deliver economically. But aren't things getting worse for many?

If I was to run for election now I'd get 90 per cent. The new government (led by the prime minister Mr Jan Bielecki) is full of competent people. True, they are from the third division. They're not well-known. But that's how I wanted it. They want to join the first division and they'll work hard to get there. You know how the first division acts. They sit there smoking their pipes and thinking about things. That's OK in other conditions but not now.

I'm a man who gets down to resolving problems. I don't ask whether it's the done way or not. I raise issues. People don't always understand my motives. But the president must always have answers and propose his own solutions – he can't allow himself to be taken by surprise. I'm not taking a conventional approach and you should be careful how you assess what I am doing.

My role is a fluid one, searching for solutions and forcing people into democracy. Let parliament get angry. Let them rebel. I want to force people to think. I want to provoke them out of the theories of communism.

After 50 years of communism you cannot just impose a better system on people. The thing is to provoke them and point them in the right direction. But if there was a threat (to democracy) and events go in a wrong direction then something decisive would have to be done.

We won't get to democracy with an apathetic society. People have been fooled by politicians in the past and have to understand what's going on. That's why I provoke them into arguing and thinking. I don't want them sitting on sofas smoking pipes. That's for 50 years' time.

Interview by Anthony Robinson, Martin Wolf and Christopher Bobinski

Joe Rogaly

India's rough passage

"Indians massacre villagers", read the headline over a short news item from my colleague David Housego yesterday. His report, detailing the actions of Indian security forces in Kashmir, came as a salutary reminder of the internecine strife, government indecision and financial crises that threaten the world's most populous democracy. We who watch from afar have naturally been transfixed by events in the Gulf and the slow disintegration of the Soviet Union; meanwhile the outlook for India becomes more uncertain.

Kashmir, the only one of India's 25 states with a Moslem majority, is being held within the republic by military force. In the Punjab a Sikh uprising by proponents of an independent "Khalistan" – note how like Kurdistan it sounds – appears to be continuing. This is complicated by divisions among the Sikhs themselves. Militancy has been met with brutality. The slaughter of innocents by terrorists is evident. Yet the grievances endure; the ideal of Khalistan will persist even if modified by events. There is also a continuing undercurrent of revolt in Assam, in the north-east, while in the enchanting southern state of Tamil Nadu the Tamil Tigers take their recreation leave from fighting in Sri Lanka by imposing their own will on parts of their home ground. Clearly the peaceful democracy so well espoused in London salons by the late Mr Jawaharlal Nehru is not working as well as it should.

This is hardly surprising. The US has cohesion because its original settlers, who were overwhelmingly from the British isles or German-speaking parts of Europe, created a melting-pot into which later arrivals have to be poured. It works, if imperfectly. But imagine a federated Europe, stretching from the Atlantic to the Urals and Stockholm to Naples, in which the Germans predominated and their language and that of a departed army of Hindi-speaking conquerors were the two official media of government and business. In the long run it would not work.

Perhaps what we are seeing in India today is the beginning of the end of the long run. There was no Indian state before the British created its political boundaries. The legacy of the Raj was picked up by an educated elite wedded to the notion of a socialist, secular, permanently unified state. The older members of this elite still retain England – its language, history and culture – in their heads; their children less so. The more ambitious among the governing classes still entertain visions of India's grandeur as the leader of the nonaligned nations, a senior player upon the world state, even a nuclear power.

Reality is eating away at the ideas of Mr Nehru and the founding fathers. Socialism is increasingly out of fashion in most parts of the world, perhaps puzzlingly so to some Indians. (There are two communist parties, which together have 56 seats in the country's 524-member lower house of parliament.) Yet for the election due next month Mr Rajiv Gandhi, inheritor of the leadership of the founding Congress party, is fighting on a manifesto that promises both a programme of privatisation and a cut in government spending.

Reality is eating away at the ideas of Nehru and the founding fathers

It is hard to maintain the secular ideal. The revivalist Bharatiya Janata Party, BJP, trades upon the paradoxical feelings among Hindus that although they are the overwhelming majority they are somehow threatened by Moslems, Sikhs, and other minorities. This reaches deep into the psyche of many Hindus. Indian acquaintances of wide erudition and a cosmopolitan mien have confided to me that they see a point in BJP's proposal to construct a Hindu temple on a site claimed by Moslems. Mr Gandhi needs Moslem votes and cannot play the Hindu card, but he has offered a compromise on job reservation for lower castes, offering to support a scheme without giving figures.

As to national unity and international status, postwar Indian foreign policy has been firmly based on cementing a special relationship with the Soviet Union. But now we live in a one-superpower world, and any outside acquiescence in bloody attempts to repress secessionist movements will depend upon the US. There is not much point in being nonaligned if there is no balance of power within which not to align yourself. During the Gulf war India managed to offend almost every party – its old friends, the Iraqis, by doing nothing, and its potential business partners, the Americans, by cutting off overflying rights to refuel at Bombay.

It will be difficult to mend such broken fences until the election produces a new government, probably a coalition, possibly led by Mr Gandhi. The first step, however, will be to produce a budget, postponed for electoral reasons, and the step after that will be to sit down with India's creditors. This is where outsiders, like the IMF and the World Bank, have some leverage. They will not provide cash without strings. But how far should conditionality go?

It is in everyone's interest to strengthen Indian democracy, and – as the Gulf war and its aftermath show – it is the prevailing fashion to maintain existing boundaries however colonialist their origins. But Indians are independent-minded people. They need not follow fashion. They would be wise at least to loosen their tight republic and replace it with a true federation, or, better, confederation – in short, to decentralise administration outwards and far away from Delhi.

The new government should state its intentions about economic liberalisation, and clear its mind about whether it welcomes inward investment or seeks to drive it away by the sheer weight of obstructive bureaucracy. I have anecdotal evidence about an Indian mega-millionaire who made his money in the US and wanted to invest $250m back home but withdrew after three months of frustrated attempts to meet the demands of the Indian civil service. There is a huge wealth of talent and drive among India's 850m people. They need to shed the remaining burden of the Raj, even take the risk that in the end some of them go their separate ways, if they are to realise their potential.

LETTERS

The case for an international adviser

From Mr Brian Reading.

Sir, Your leader ("The new consensus", April 20) spots the irony in the announcement on the same day last week of Sir Terence Burns' promotion from chief economic adviser to permanent secretary to the Treasury, with news of a record rise in unemployment and an accelerating fall in industrial production. Later you support the need for some sort of National Economic Assessment – while your Job in the News article below the leader sought a bright, pragmatic economist for Sir Terence's old job. Following the failures in economic management in the 1980s, perhaps you should have gone further.

Fiscal policy is now on autopilot and monetary policy is dictated by exchange rate considerations. British economic prospects depend largely on what is happening to the rest of the world. The Treasury no longer uses macro-economic forecasts to steer the economy. Nor does it produce reliable forecasts for others. This job, and the National Assessment, should be handed over to independent well-financed economic research institutes.

The Treasury's forecasting errors for the British economy are well known. But it is possibly worse at predicting international economic prospects on which our future now rests. The 1990 budget forecasts, for example, predicted that the US current account deficit and the Japanese surplus would increase while the large German surplus, despite unification, would remain broadly unchanged.

This suggests that Sir Terence's old post, as chief economic adviser, might also be abolished. Instead, the government should appoint an international economic adviser, so as to be better informed on what is going on in the rest of the world. Moreover, in looking for candidates, it should consider an American, German, French or even a Japanese.

Brian Reading,
83 Shakespeare Tower,
Barbican, EC2

Letting up on house pressure

From D.B. Robb.

Sir, Your editorial (Housing and inflation, April 16) suggests that lowering the value of housing would help to curb inflation. The only sound long-term way of reducing price pressure on housing is to increase supply, and that would naturally follow a full revival of the letting sector.

Sadly, that can happen only when all political parties are in agreement, since too many fingers have been burnt for landlords to enter the letting market with confidence.

In the meantime you can hold back house price inflation with high interest rates in the same way as a dam holds back water – the pent-up demand is still there, and will manifest itself when it is able to.

D.B. Robb,
Durley Gate,
Savernake,
Marlborough, Wilts.

Interim solution for Treuhand

From Mr Derek Mortimer.

Sir, Your article "So much to do, so little time" (April 9) mirrors precisely the fundamental problem of managing change. David Goodhart's report on the Treuhand's fear that lack of appropriate management resource could lead to wastage of money on a massive scale echoes the gap being experienced by many more developed commercial and industrial organisations. Their recourse has been to interim management.

For a long time the concept of short-term executives has been one of a stop-gap solution. That this is no longer the case is a tribute to the high-level experienced people from all over Europe who are prepared to roll up their sleeves, tackle a specific assignment, achieve significant results and move on to the next project, adding value through their business skills, motivation, and lack of emotional excess baggage.

If the Treuhand wishes to attract the type of manager who will enjoy the challenge of participation in the resurrection of a market economy, the interim management route is an obvious solution.

Derek Mortimer,
managing partner,
Triple A,
18, Lawrence Avenue,
New Malden, Surrey

Banking on no surprises

From Mr Graham Watson.

Sir, You have pointed out that the European Bank for Reconstruction and Development is the only institution of its kind which is based in London.

With all the sniping that has attended its establishment, perhaps this is hardly surprising.

Graham Watson,
3 Haslemere Road, SE5

Pensions below 60 still a matter of discretion

From Mr Paul Greenwood.

Sir, Richard Waters' article on pensions in the Finance Bill ("Revenue paves way for curbs", April 18) gives a strong inference that pension ages below 60 are no longer allowed in any circumstance.

The change in clause 33 of the Finance Bill amending allowable retirement ages applies only to schemes approved by the Inland Revenue under mandatory approval.

Few occupational schemes are approved under this route. The vast majority, probably more than 99 per cent, are approved under Revenue discretionary approval. The clauses on discretionary approval give the Inland Revenue very wide powers. For instance, in some circumstances for certain occupations, footballers and deep sea divers for example, they have approved pension schemes with normal pension ages considerably below those allowed under mandatory approval. There is nothing in the Finance Bill which changes or restricts such practice.

The Inland Revenue is believed to be currently reviewing its discretionary practices. An announcement is now expected in September in the form of the issue of new Inland Revenue Practice Notes. These notes summarise how it exercises its discretion granted to its under the legislation. It could well be that for ordinary schemes under its discretionary powers the Inland Revenue restricts pension ages to the band from age 60 to 75, irrespective of sex.

However, until the issue of new Practice Notes or some other announcement, it is not actually known what the Inland Revenue's attitude with regard to pension ages will be for the vast majority of pension schemes.

Paul Greenwood,
William. M. Mercer Fraser,
44/45 West Street,
Chichester,
West Sussex

Offering support to the ailing company

From P H Nunnerley.

Sir, As you would expect I totally disagree with the letter from Jeremy Parker (April 15) suggesting the clearing banks were often too tardy in helping ailing companies.

We currently have some 400,000 small business customers on our books and are deeply committed to ensuring that our customers' well-being is a top priority – it has to be in order to guarantee our own future as a viable company.

Mr Parker chides us for not using our "early warning systems" to detect the first signs of decline in the quality of security. In many respects we are largely in the hands of the companies themselves – in a recession the most ominous sign to a good bank manager can be the total lack of contact with a business customer.

As one of my branch managers in central London put it recently: "It's when I don't hear from customers that I start to worry." That said, there are many forms of assistance we can and do give – and we constantly remind customers to come to their bank manager at the first signs of problems. Peremptory calling in of borrowing may only lose the bank both its investment and its customers.

P H Nunnerley,
assistant general Manager,
Lloyds Bank,
Canons House,
Canons Way, Bristol

Fax service

LETTERS may be faxed on 071-873 5938. They should be clearly typed and not handwritten. Please set the fax machine for fine resolution.

FINANCIAL TIMES
Tuesday April 23 1991

Treuhand in DM2bn commercial paper issue

By David Goodhart in Bonn

THE fledgling German commercial paper market is set to receive a major boost from the east German Treuhand, the state-backed privatisation agency, which is planning a large borrowing programme to finance restructuring investments at the several thousand companies it still owns.

The Treuhand is today expected to announce a commercial paper programme of up to DM2bn ($1.1bn) arranged by Dresdner Bank, which would make it easily the largest programme of its kind since the market began to take shape earlier this year.

If the issue runs smoothly the Treuhand may well test the market again to cover more of its DM25bn borrowing limit for 1991.

Some Treuhand officials have also speculated that the organisation will make use of commercial paper, among other instruments, to gradually take over up to DM70bn of the DM100bn in old debts that the east German corporate sector is still theoretically carrying.

The Treuhand is already paying interest to the Bundesbank on those old debts and some analysts believe that for simplicity's sake it would be better to centralise the debt under one roof.

The Bonn Finance Ministry admits that much of the corporate debt will not be repaid but still officially prefers a case by case policy on debt forgiveness.

The commercial paper market is only available to the very best risk borrowers, who thereby acquire relatively favourable terms.

The Treuhand can thus exploit its semi-government status to save a bit of money on its extensive borrowing needs. The maturity of the first issue is expected to be one year.

Commercial paper only became a possibility in Germany earlier this year when the Bundesbank withdrew its previous objections, Finance Ministry permission for such issues was no longer required, and the turnover tax on securities was abolished.

Since then the biggest issue announced, although not yet completed, was a DM500m programme for Daimler Benz arranged by Deutsche Bank. The Treuhand would not comment yesterday on when, if at all, it intended to tap the commercial paper market.

However, Finance Ministry officials in Bonn did confirm that such a move, rumoured for some time, was now imminent.

Poll defeat will curb Kohl's ability to govern

By David Marsh in Bonn

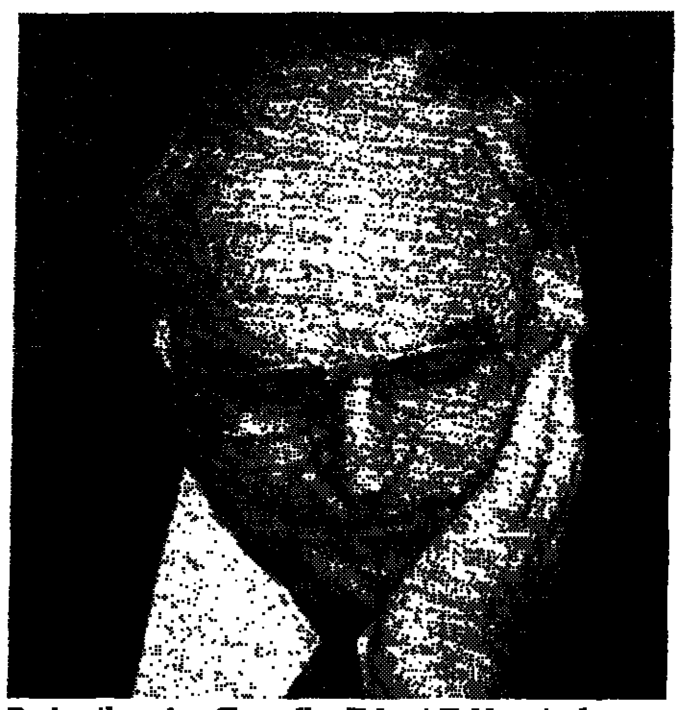
JUST AS Chancellor Helmut Kohl's problems over German unity have been manifestly increasing, his capacity to do anything about them has now plummeted.

Sunday's crushing defeat for his Christian Democratic Union (CDU) in the state of Rhineland-Palatinate leaves Mr Kohl's party in control in only one of the 10 West German states making up the old Federal Republic.

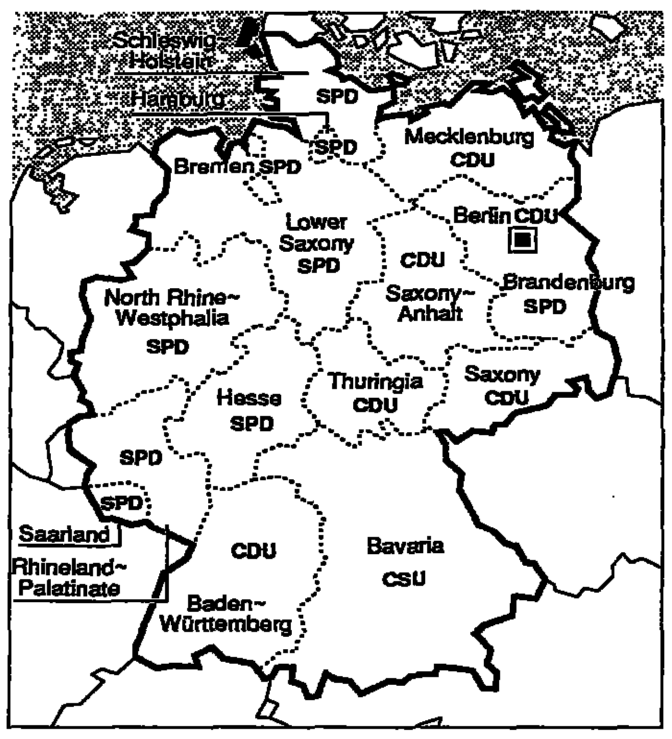
The loss of the right's majority in the upper house of parliament, the Bundesrat (federal council), which has a veto over all tax legislation, significantly constrains Mr Kohl's ability to govern.

Less than five months after the chancellor gained a sweeping victory in the December 2 all-German general elections, German politics is facing a confused period of confrontation, uncertainty and drift.

The centre-right coalition in Bonn, made up of the CDU, the Bavarian Christian Social Union (CSU), and the liberal Free Democratic party (FDP), still has a secure majority in the lower house, the Bundestag. But Germany's highly developed system of political checks and balances now deprives Mr Kohl of the necessary means to push through unpopular decisions.



Paying the price: Chancellor Helmut Kohl yesterday



A large part of his misfortune stems from his lack of foresight last year in failing to present voters with a more accurate picture of the economic and social challenges caused by German unification. Mr Hans-Werner Meyer, head of Germany's Trade Union Federation (DGB), believes that if Mr Kohl had announced the likelihood of tax rises before the December elections, he would probably have won with a still higher majority.

As it is, following the large rises in taxes and social security levies decided in February, the Chancellor is now paying a triple price for his foolishness. First – as was widely predicted at the end of his year of victory in 1990 – his personal credibility has taken a nose-dive.

Second, the round of Social Democrat election successes in recent state polls has resurrected regional coalitions between the SPD and the Greens in Lower Saxony, Hesse and now (probably) Rhineland-Palatinate. This has effectively resurrected at a regional level the Greens party which is one of Mr Kohl's pet hates and which appeared to be close to extinction after its collapse in the national December elections.

Third, Mr Kohl's misfortunes have prepared the way for a new spate of coalition bickering. The chancellor's slightly bizarre revelation a fortnight ago that Mr Wolfgang Schäuble, the wheelchair-bound interior minister, was the most likely man to succeed him has been roundly criticised by Mr Theo Waigel, the finance minister and CSU chairman. Mr Waigel – who shares the blame for last year's extraordinary economic policy insouciance – believes that the premature start to a leadership debate has damaged the coalition's poll standing.

Mr Waigel himself has done his bit towards incurring the wrath of the free-market wing of the FDP by announcing at the end of last week his decision to water down plans for cuts in the next few years in taxes on companies and high-earners. But these would anyway now have been blocked by the SPD majority in the Bundesrat – as well as by the need to trim the swelling budget deficit.

In view of decision-making disarray, and the sharp deterioration in Germany's financial position, Mr Kohl's main hope is that an international economic recovery later this year come to Germany's rescue.

Unfortunately, the foreign exchange markets – where the D-Mark fell yesterday to a 17-month low against the dollar – may upset the prospects. With the Bundesbank signalling its desire to press harder on the monetary brakes to bolster the D-Mark, Mr Kohl may face before too long, in addition to the recession in east Germany, a sharp slowdown in growth in the previously booming west.

$ gains strength as D-Mark weakens after state poll

By Andrew Fisher in Frankfurt and Rachel Johnson in London

HOPES of economic recovery in the US kept the dollar at a 16-month high yesterday, undermining sterling and further weakening the D-Mark in the political aftermath of the weekend's state election in Germany.

The Bonn government's defeat in a regional election in the home state of Mr Helmut Kohl, the chancellor, gave the dollar's rise against the German currency a fresh impetus.

In Germany and abroad, the vote against the Christian Democrats in the Rhineland Palatinate was seen as a further blow for Mr Kohl when the condition of the east German economy is causing increasing concern. The defeat also removes the government's majority in the Bundesrat, the upper house of parliament, which has the power to veto legislation.

Meanwhile, confidence in the US economy has been stregthening – with the dollar climbing to a Frankfurt close of DM1.7585, its highest since the end of 1989. It was helped by comments by Mr Otmar Issing, a Bundesbank director, who restated the central bank's policy of following a monetary and not an exchange rate goal.

Dealers took this to mean the Bundesbank did not intend to intervene heavily to brake the dollar's rise, although it is keen that the German currency should remain strong to help ward off rising inflation.

Central banks have not been intevening to curb the mark's recent falls with concerted dollar sales. This has added to market perceptions that the US authorities are happy to see the dollar strengthen further, and that the Federal Reserve is content with the current level of interest rates.

As the Bundesbank is thought to be unwilling to stem the mark's fall, the markets are expecting the currency volatility to last at least until agreements about interest rates emerge from this week's meeting of the Group of Seven countries in Washington.

German share prices fell back with the currency. On the Frankfurt Stock Exchange, the DAX index shed 1.7 per cent yesterday to close at 1,571.91.

Sentiment was also upset by declines on Wall Street and in Tokyo as well as the German election result. In New York afternoon trading, the Dow Jones index was down 39.60 at 2,925.99.

There were also sharp falls in the pound and on London's equity market. The FT-SE 100 share index closed down 29.3 at 2,490.8, also affected by early falls on Wall Street.

Currencies and markets, Section II

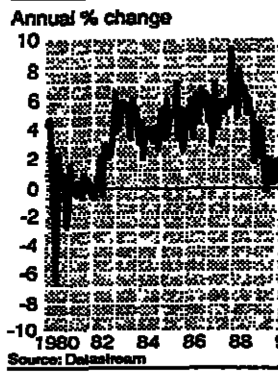
THE LEX COLUMN

The Bundesbank marks time

Despite the headlines about the surging dollar, the real story in the foreign exchange markets still looks to be the weakness of the D-Mark. Given the dissent among the Group of Seven, there might seem a hint of perversity about this. Germany argues for monetary tightness and the US for laxity, yet money continues to flow from the D-Mark to the dollar. Allowing for the difficulty of measuring the unified German economy, it is not even clear that money supply growth in the two economies is wildly different by now. But with the help of such mishaps as Chancellor Kohl's election defeat at the week-end, sentiment on the D-Mark is running rapidly downhill.

To an extent, one can see the market's point. The way ahead for the US economy is pretty clear, apart from matters of timing. The outlook for Germany is profoundly unclear on virtually everything, including basic economic policy. The risk premium on the D-Mark, as measured by the interest rate differential, has been rising steadily for the past six months and now stands at a full three percentage points. For the Bundesbank, the immediate problem is that the US interest rate cycle may already have hit bottom, so that a rise in German rates may be needed merely to stop the differential widening further. It is hard to see how the Bundesbank can reassert its authority other than by catching the market unawares with the timing and extent of its next rate rise. By definition, if the Bundesbank gets it right there could be shocks ahead for the other members of the ERM.

UK retail sales volume



Source: Datastream

AT&T/NCR

American Telephone and Telegraph's five month bid for NCR looks to be over bar a little more shouting. Sunday's improved offer from Ma Bell delivers the $110 per share demanded by NCR, at least on the basis of the AT&T price at Friday's close. And while the target company is demanding still more protection for shareholders in the event of AT&T stock slipping back, there is a limit to which such guarantees can be reasonably extracted.

An agreed deal has always been on the cards, though Wall Street's strength is helping resolve a corporate battle which has been grubby even by US standards. AT&T has been beleaguered on several fronts. It may have scuppered NCR's plan to put 8 per cent of the votes into the hands of its employees but as things stand it is due back in court soon to try to remove another poison pill. The telecoms giant, in the meantime, has managed to unseat only four members of the NCR board and is faced with the ousted chairman continuing the fight as chief executive, while staff morale at both companies may soon become an issue. With all these problems banking up it seems prudent to take advantage of the healthier share price, pay a little more and hope NCR goes quietly.

The all-paper nature of the new offer is crucial, since it would allow AT&T to account for the takeover without having to write off goodwill against earnings. AT&T shareholders nevertheless face some short-term dilution. They will also have a long wait for the benefits, though that is not to say they will not come. It is just that the precedents for merging computer and communications businesses - very much a 1980s idea - are not terribly auspicious.

Retail sales

The quirky nature of the latest UK retail sales figure leaves the markets in the dark on consumer spending just when guidance is most needed. Analysts were yesterday kicking themselves for forgetting that the last VAT rise in 1979 led to a near-7 per cent jump in sales on the month, followed by a 10 per cent plunge the month after.

But the rise in the VAT rate this time is insignificant compared with last, especially since many retailers were prompt to announce that they were not passing it on. If there has been a real underlying recovery, it will be the more welcome after a run of seven months in which retail volume was down on the year before. It is also the more vexing to have to wait another month to find out.

That apart, the prospects for a consumer-led recovery are as opaque as ever. It might be thought that real wage increases would be an important determinant. But it remains to be seen what will happen if workers settle for low nominal rises on the basis of plunging headline inflation, only to find that the stubbornness of core inflation leaves them worse off than before. In the meantime, the markets may have to settle for guidance on production rather than consumption. Next Tuesday's quarterly survey from the Confederation of British Industry, which ought to show the first signs of revival, will be the most closely scrutinised for a long while.

Ratners

Judging by the reaction to yesterday's figures, investors think Ratners has turned some kind of corner. The shares have underperformed the market by a third in a year and by a half over three years, so a change was overdue. Last year's small rise in pre-tax profits to £112m was a reasonable performance, especially when measured against other retailers. But there was no hiding the dilutive effect of the undigested Kay Jewelers acquisition in the US. Worryingly, too, costs in the UK rose much faster than sales.

Ratners is now trying to persuade investors that it has grown up. Out has gone the image of the mindless pursuit of sales. In its place is a sober management culture in which costs must be contained to protect the bottom line from the effects of flattening turnover. It all looks appropriate, comes perhaps six months late and is arguably inevitable at such a low point in the economic cycle.

In the medium term, Ratners will push ahead with the integration of Kay in the US and try to grow organically towards 50 per cent market share in the UK. Less expansionist shareholders might prefer to see the company exploiting its UK leadership by forcing immediate price increases on a sector where volume growth has tailed off. On forecast profits of £125m, the shares at 177p are on a prospective p/e of 9, backed by a solid yield of 8 per cent. If Ratners can prove that it has cracked the US market, its shares will doubtless more than make up lost ground. The rating seems fair until then.

Polish debt forgiveness criticised by US group

By Stephen Fidler, Euromarkets Correspondent

THE DECISION by the Paris Club of creditor governments to forgive at least half Poland's debt to them is unhelpful for the stability of the international financial system, the Institute of International Finance, the Washington-based group which promotes the views of international banks, said yesterday.

Mr Horst Schulmann, IIF managing director, described the forgiving of Poland's debts as foreign aid through the back door. It would lead other debtor governments to seek similar treatment from the Paris Club, he said, suggesting it would contribute to the breakdown of order in international finance.

He also criticised the pressure on banks to match the Paris Club in granting at least 50 per cent forgiveness to Poland.

This pressure was one of two developments over the last six months – the other being the continued growth of interest arrears owed by developing countries to commercial banks – which were damaging the prospects for flows of private capital to middle-income countries, he said.

The IIF calculated that interest arrears owed to banks grew to $26.8bn at the end of March, from about $18bn six months earlier.

Mr Schulmann said the fact that some countries were allowed to build up arrears while others, particularly in Asia, did not, showed a double standard.

Financial institutions should refuse all new loans to countries in arrears until they have an effective agreement to eliminate them.

He called on finance ministers, meeting in Washington later this week for the spring meetings of the International Monetary Fund and World Bank, to address three issues: the global capital shortage, which could not be managed merely by lowering interest rates; growing interest arrears by debtor countries; and the growing "moral hazard" in the international financial system, as epitomised by the Polish debt forgiveness deal.

EC electronics companies ask Brussels for extra protection

By William Dawkins in Paris and David Buchan in Brussels

PRESSURE to protect the European Community's troubled electronics industry intensified over the weekend at a crisis meeting between key members of the European Commission and the EC's five main electronics companies.

The industrialists pressed their case for specific support measures going beyond the general plan presented by Brussels last month to channel more EC research money into demand-creating infrastructure projects. The commissioners apparently expressed sympathy for the companies' increasing difficulty with Japanese competition, but in no way committed the EC executive, officials said yesterday.

The secret meeting was called last Friday and Saturday in a small town in Burgundy by Mr Jacques Delors, the Commission president, with Bull and Thomson, France's state-controlled electronics companies, Siemens of Germany, Olivetti of Italy and Philips of the Netherlands.

Also present were Mr Martin Bangemann, the EC industry commissioner, Mr Filippo Maria Pandolfi, the research commissioner, and their two directors-general.

The attempted secrecy of the meeting, news of which leaked into the French press over the weekend, reflects the sensitivity of the issue, as much within the Community as in relations with Japan.

Sir Leon Brittan, the competition commissioner who had succeeded in pruning dirigiste elements out of the Commission's March paper on the electronics sector, was a notable absentee from the Burgundy meeting – although he was assured in advance that it would not compromise his policy of controlling state aids. Sir Leon is examining the complaint by ICL of Britain, which is majority-owned by Fujitsu of Japan, against the French government's recent decision to inject FFr6bn ($1.06bn) of fresh capital into Bull and Thomson.

Mr Alain Gomez, chairman of Thomson, recently called for the establishment of high EC customs duties on Japanese electronic goods for an adjustment period of five years. "That will be enough for us to catch up the unwarranted advantage acquired by the Japanese thanks to 30 years of unfair competition," he told Le Monde newspaper. An EC official said yesterday that Mr Gomez's ideas could not be considered close to Commission thinking.

Tomorrow, EC research ministers will discuss, at France's insistence, the issue of whether foreign-owned companies should participate in EC research programmes. ICL was recently barred from a couple of Esprit information technology programmes in which it had been marginally involved. But UK officials said yesterday they had firm assurances from Mr Pandolfi that ICL would not be excluded from any important research on grounds of its ownership.

Siemens results, Page 20

WORLDWIDE WEATHER

		°C	°F
Ajaccio	F	15	59
Algiers	F	15	59
Amsterdam	F	8	46
Athens	F	22	72
Bahrain	–	–	–
Bangkok	R	35	95
Barcelona	R	9	48
Beirut	–	–	–
Belfast	F	8	46
Belgrade	S	11	52
Berlin	F	9	48
Biarritz	S	12	54
Bombay	F	32	90
Bordeaux	C	11	52
Boulogne	F	9	48
Brussels	C	7	45
Budapest	C	11	52
Buenos Aires	F	22	71
Cairo	F	36	97
Cape Town	S	24	75
Caracas	–	–	–
Casablanca	F	19	66
Chicago	S	2	36
Cologne	R	8	46
Copenhagen	R	3	37
Corfu	S	18	64
Dallas	C	15	59
Dublin	C	10	50
Dubrovnik	S	14	57
Edinburgh	C	8	46
Faro	F	17	63
Florence	S	13	55
Frankfurt	R	7	45
Geneva	S	10	50
Gibraltar	R	14	57
Glasgow	S	9	48
Helsinki	Sn	3	37
Hong Kong	C	21	70
Innsbruck	F	9	48
Inverness	C	7	45
Islamabad	F	28	82
Istanbul	F	14	57
Jakarta	R	30	86
Jersey	F	9	48
Johannesburg	S	21	70
Lima	C	25	77
Lisbon	S	17	63
London	C	10	50
Los Angeles	C	13	55
Luxembourg	C	3	37
Madeira	S	18	64
Madrid	S	13	55
Majorca	F	14	57
Malaga	R	15	59
Malta	F	17	63
Manchester	F	10	50
Manila	C	33	91
Melbourne	C	15	59
Mexico City	–	–	–
Miami	S	18	64
Milan	C	9	48
Montreal	C	6	43
Moscow	C	4	39
Munich	F	9	48
Nairobi	–	–	–
Naples	F	16	61
Nassau	C	30	86
New Delhi	S	34	93
New York	R	6	43
Nice	S	12	54
Nicosia	S	22	72
Oporto	S	16	61
Oslo	C	7	45
Paris	C	7	45
Peking	S	25	77
Prague	F	9	48
Reykjavik	F	5	41
Rhodes	S	22	72
Rio de Janeiro	F	30	86
Rome	S	14	57
Salzburg	F	9	48
San Francisco	C	11	52
Seoul	S	19	66
Singapore	F	30	86
Stockholm	F	5	41
Strasbourg	F	11	52
Sydney	–	–	–
Taipei	C	30	86
Tangier	R	14	57
Tel Aviv	F	24	75
Tenerife	C	20	68
Tokyo	S	19	66
Toronto	R	4	39
Tunis	F	14	57
Valencia	F	14	57
Venice	C	11	52
Vienna	F	9	48
Warsaw	Sn	3	37
Washington	F	9	48
Zurich	F	9	48

Temperatures at midday yesterday C–Cloudy Dr–Drizzle F–Fair Fg–Fog H–Hail R–Rain S–Sunny Sl–Sleet Sn–Snow T–Thunder

INSIDE

Occidental back on the up and up

Mr Ray Irani, the new chairman of Occidental Petroleum, has taken a scalpel to the Los Angeles-based energy and chemicals group with the aim of concentrating on its core businesses. His medicine appears to be working as Occidental yesterday announced net first-quarter earnings up from $108m to $136m. Bernard Simon reports on the group's progress since the death of its legendary chairman, Armand Hammer. **Page 22**

Mixed results at Spanish banks

Two leading Spanish banks have reported sharply different profit performances during the first three months of the year. Banco Santander, the commercial bank, increased first-quarter net consolidated profits by 21 per cent while Banco Espanol de Credito, one of Santander's main rivals, reported a 17 per cent drop in net profits for its financial group, which excludes its industrial corporation. **Page 20**

Mine, mine, all mine

Mining generates more than half of Peru's foreign exchange earnings and employs one in five of the country's population. But the sector is in poor shape. Preliminary figures for 1990 indicate that losses may be about $130m. Tax concessions announced recently by Peruvian President Alberto Fujimori (above) will give the country's beleaguered mining sector a much-needed breathing space. **Page 30**

Move to oust Budgens head

A group of institutional shareholders is attempting to remove John Fletcher as chairman of Budgens and install a new management team at the troubled UK grocery chain. The group which holds 27 per cent of Budgens' shares, has put a proposal to the board "concerning the future direction of the company". John Thornhill reports. **Page 26**

Travis Perkins falls again

Travis Perkins, the builders' merchants and timber group, has seen its profits fall for the second year in a row – due largely to the recession in the UK housebuilding industry.

Pre-tax profits fell almost 38 per cent from £32.8m ($56.2m) to £20.36m, compared with a decline of 16 per cent the previous year. Tony Travis, group chairman, noted: "The current year will be another difficult one for the construction industry ... and first-half profits, therefore, will be down sharply." **Page 26**

Market Statistics

Companies in this section

Chief price changes yesterday

FRANKFURT (DM)			
Falls			
Aachen Mch	830	–	15
Daimler-Benz	680.5	–	10.5
Degussa	325.5	–	12.7
Deutsche Bnk	628.5	–	13
Kaufhof	495.2	–	14.8
Linde	743	–	22
NEW YORK ($)			
Rises			
NCR	101¾	+	5
Mobil	68¾	+	½
Southeast	6⅛	+	⅛
Falls			
NCNB	37½	–	1⅞
Martin Marieta	58¾	–	¾
Am T & T	36⅛	–	1⅛
PARIS (FFr)			
Rises			
Bancaire Cie	504	+	14
Radiotechn	385.9	+	10.9
Falls			
Arjomari Pr	2225	–	56
CSIP	1018	–	29
Peugeot	543	–	10
Spie Batign	521	–	19
TOKYO (Yen)			
Rises			
Fuji Kiden	1200	+	90
Inoue Kogyo	965	+	65
Oval Eng	900	+	100
Falls			
Mitsui Wharf	1030	–	140
Seino Trans	2250	–	150
Yamada	1990	–	260

New York prices as at 12.30

LONDON (Pence)			
Rises			
Boot (H)	578	+	25
CMW	68	+	15
Cronite	24	+	12
Dewhirst	36	+	7
Egerton Trust	19½	+	3½
Gabicci	58	+	8
Hammerson A	630	+	15
ML Labs	455	+	18
Polymark	28	+	8
Ratners	178	+	8
Falls			
Anglian Water	286	–	10
Brent Walker	66	–	8
Carlton Comms	445	–	14
Christies Intl	218	–	8
Clayform Prop	57	–	13
Fields (Mrs)	11	–	4½
Gestetner	213	–	20
Guinness Mahon	42	–	8
Trafalgar House	245	–	9

Siemens held back by Nixdorf loss

By Andrew Fisher in Frankfurt

SIEMENS, the German electrical and electronics group, lost DM380m ($227m) on its computer activities in the first half of the financial year to September 30, 1991, as it began to integrate the business of Nixdorf, which it rescued last year.

The continuation of Nixdorf's losses have added to Siemens' burdens at a time when world economic conditions have deteriorated.

Its total first-half net profits rose 6 per cent to DM793m. Siemens did not spell out the extent to which the Nixdorf loss held back its full result.

Analysts, who pointed out that German companies have considerable accounting leeway in arranging how they report their results, have already forecast lower group earnings per share this year.

The group said the loss made by Siemens Nixdorf Informationssysteme, created by the merger of its computer interests with Nixdorf, partly reflected a backlog of DM500m in unbilled sales. This was caused by the time taken to integrate the two companies.

New computer orders in the first half totalled DM5.7bn, a fall of 5 per cent, with invoiced sales 17 per cent lower at DM5.1bn. However, allowing for the backlog sales were less than 10 per cent lower.

Siemens said the integration of Nixdorf into the group was going well, but was not completed.

The second quarter saw strong gains in orders and sales.

Siemens Nixdorf said recently it might not show a profit for the whole of 1990-91. Nixdorf made a DM800m loss in the last nine months before its full absorption by Siemens last October. Some DM300m of this was to meet restructuring costs and valuation changes.

The group has already warned that growth in total profits would be difficult this year. In the last financial year, net income rose 6 per cent to DM1.7bn and Siemens raised its dividend.

Outlining overall group progress in the first half, Siemens said it booked a 15 per cent rise in new orders to DM41.4bn, though half the improvement stemmed from the first-time inclusion of new businesses.

Domestic orders rose 30 per cent, with business in east Germany, much of it linked to vital infrastructure improvements, totalling DM1.4bn.

The group said foreign business stagnated. The 6 per cent rise in foreign orders to DM23bn was mainly due to the inclusion of the merged Siemens Nixdorf operation and the activities acquired from Plessey of the UK.

AT&T keeps the pressure on NCR with $110 per share offer

Winners and losers in the global dream

By Alan Cane

If AT&T is now in sight of achieving its aim of buying NCR, the fifth-largest US computer manufacturer, the only sure winners are likely to be NCR's own shareholders.

The takeover battle is likely to cost AT&T, the US telecommunications giant, $1.36bn more than it bargained for; and there will be no guarantee that AT&T's dreams of building a successful global information technology company – spanning computers and communications – can be realised.

If AT&T's latest bid, of $110 a share (in AT&T stock or stock and cash) for the Ohio-based computer company is accepted, NCR shareholders will have seen the value of their investments increase almost two and a third times in the past four months.

They owe thanks for their good fortune to the rugged determination of Mr Charles "Chuck" Exley, NCR president, to hold out for the best possible price once it seemed clear there was no hope of resisting AT&T's embrace.

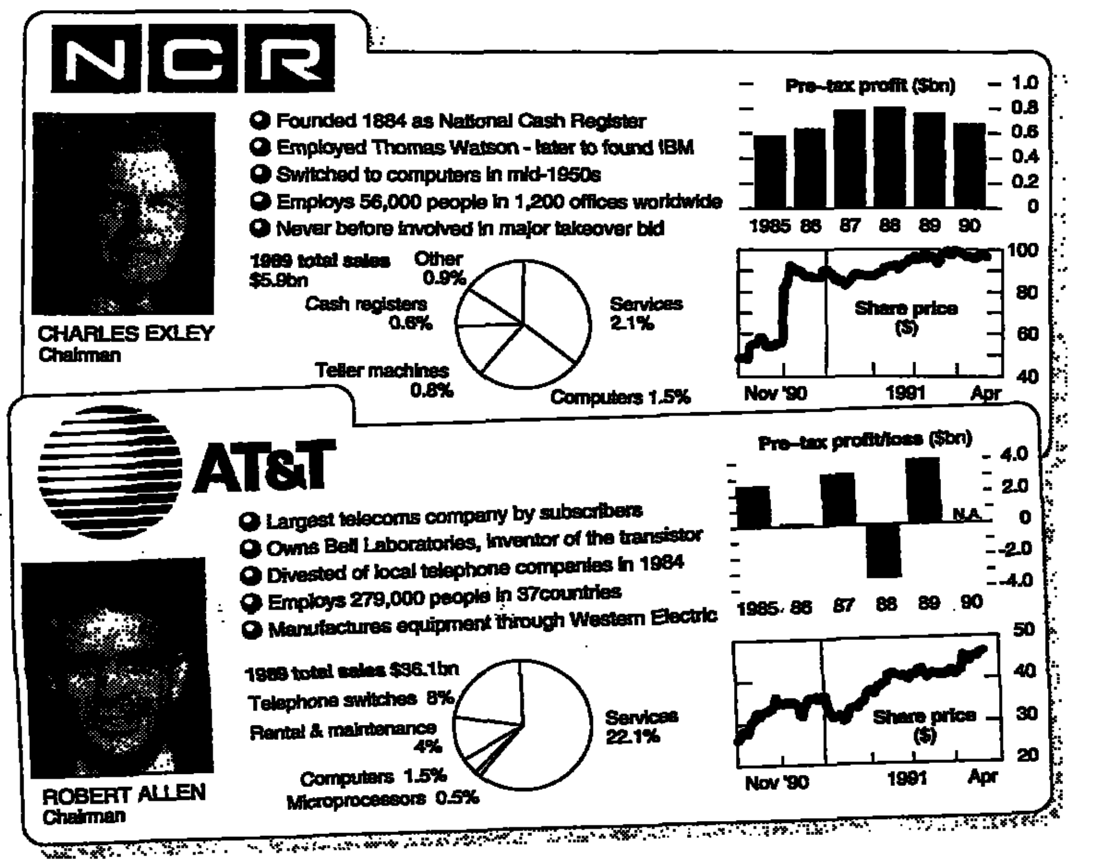
It was not a universally popular attitude. NCR's shareholders interested in the future of the company as a computer business applaud Mr Exley's apparent intransigence; those who are interested chiefly in realising the value of their investment as quickly as possible – Wall Street's arbitrage community – think he has merely been dragging out the inevitable.

AT&T's opening bid in December last year – at $90 a share – valued NCR at $6.12bn. Although Mr Exley immediately rejected the offer – arguing there was no industrial logic in the takeover – he suggested that the companies could do business if AT&T valued NCR at $8.5bn or $125 a share.

From that point, resistance deteriorated into price haggling. Mr Exley reduced his demand to $110 a share while Mr Robert Allen, chairman of AT&T, raised his offer first to $100 a share and then two days ago to NCR's asking price. The latest offer values the company at $7.48bn.

The new offer could have broken the impasse in what has been one of the most bitterly-fought hostile takeover battles the modern computer industry has ever witnessed. If the offer is accepted, then AT&T will have spent more than $12m in legal fees and NCR about $7m on its defensive strategy.

From the outset, a sizeable proportion of NCR's shareholders had wanted to accept the AT&T bid. AT&T, however, was constrained from simply buying shares in the market by Maryland's takeover laws. These do not allow a company to acquire more than 10 per cent of another group's stock without the approval of the target's board.



NCR showed an appetite for the fight which surprised those familiar with its sleepy marketing methods. It deployed a series of "poison pill" defences including an employee share ownership scheme, which was later declared invalid. AT&T set up a proxy battle at the NCR shareholders' meeting in March and succeeded in ousting four directors, including the chairman.

AT&T's battle for NCR is, however, likely to prove only the beginning of a very long road for North America's largest telecommunications company. The history of mergers between large electronics groups is stained with red ink and littered with failures.

Unisys, for example, the world's fifth-largest computer company forged five years ago from parts of Sperry and the Burroughs Corporation, lost $436m in 1990. It is still struggling to resolve the problem of two completely different product families.

Siemens-Nixdorf, put together just over 12 months ago from the loss-making Nixdorf and the barely-profitable computer operations of Siemens, is expected to lose money this year. It is proving difficult to find common ground between the radically different cultures of the two companies.

Groupe Bull, which two years ago took over the US personal computer manufacturer, Zenith, has been experiencing similar problems. This is despite its declared intention to manage the company at arms length from the rest of its computer operations. Groupe Bull is being propped up with FFr4bn ($684m) of investment from its largest shareholder, the French government.

Furthermore, over the past decade both AT&T and International Business Machines, the world's largest computer manufacturer, have made abortive efforts to invade each other's territory.

AT&T's basic plan is to merge its small and unsuccessful computer business into NCR, leaving the Ohio company essentially alone to manage the business.

For a new computer company to stand a chance of success today it must:

- Have identified a market niche in which it can be a leader;
- Offer products based on low-cost, standard microprocessor chips;
- Offer "open" systems based on standard operating software;
- Have firm control of "channels" – dealers, value-added resellers and software houses

AT&T developed, and owns copyright on, the software system, Unix, which most manufacturers now agree will become the industry standard for open systems. NCR, alone among the large computer manufacturers, has taken the plunge into designs based on low-cost microprocessors and the Unix operating system.

Despite the fact that it is not among the world's top 10 computer manufacturers, NCR is a leading supplier of financial systems and dominates the market for automated teller machines – "holes-in-the-wall".

NCR, which began as a manufacturer of cash registers in the 1800s, would give AT&T's computer ambitious a powerful fillip through its distribution channels. It has already been identified by Europe's largest manufacturers as a potential route into the US market.

The big question is whether it will be possible for the staff of two such different companies to work together profitably.

AT&T has no record of success in computers. Its computer division turns over about $1.5bn a year and loses about $200m.

A merger with NCR may be its last chance. But if it fails, it will bring the computer manufacturer down with it and Chuck Exley's worst fears about a merger he never wanted will have been realised.

T. Boone Pickens: no rush

Pickens may sell 26% stake in Koito

By Bernard Simon in New York

TEXAS CORPORATE raider Mr T. Boone Pickens is considering selling his 26.4 per cent stake in Koito Manufacturing, the Japanese motor parts manufacturer which has repeatedly spurned his advances.

A spokesman for Mr Pickens yesterday told the Associated Press news agency that the disposal of the Koito shares, currently worth about $850m, is among several options being considered by the Dallas-based financier. "We're not in any rush, but it's one of the things we're looking at," the spokesman said.

However, he denied Japanese reports that Mr Pickens has already sold his shares back to Kitaro Watanabe, the Japanese speculator who secretly financed the purchases with a loan secured by the shares.

A Koito spokesman said in New York yesterday that the Japanese company had no "direct information" on the reports of Mr Pickens' retreat, but that "we would certainly not be surprised by such a turn of events."

Mr Pickens has had several well-publicised run-ins with Koito, which has refused to give him any representation on its board and has consistently accused him of being a front for Mr Watanabe's efforts at short-term speculation.

The market price of Koito shares has halved since Mr Pickens made his initial investment two years ago through his privately-held holding company, Boone Co.

Mr Pickens' willingness to put his shares up for sale may be influenced by the financial difficulties of Mesa Limited Partnership, the large US natural gas producer of which Mr Pickens is the general partner and in which he has a 4.5 per cent stake.

Guinness Mahon warns of £35m losses in first half

By David Lascelles, Banking Editor, in London

GUINNESS MAHON, the merchant banking group which is 65 per cent owned by the Bank of Yokohama, warned yesterday that it would report a heavy loss in its interim results because of mounting bad debts.

The company is making a £30m ($51.5m) provision for loan losses, and will report an after-tax loss of £35m for the six months ending March 31. An interim dividend is unlikely to be declared.

The group will seek to raise £50m through a rights issue. This will have the full support of the Bank of Yokohama. The £50m will more than double the £45m level to which Guinness Mahon's capital has fallen after the losses.

Mr Geoffrey Bell, chairman of Guinness Mahon, said yesterday that the losses had been incurred mainly because of the bank's policy of lending to the property and small company sectors, both of which had been badly hit by the UK recession. The bank had also lent £5m to Polly Peck, which collapsed last year.

No management changes are planned, but Mr Bell said that the Bank of Yokohama would be placing more people in London to keep a closer watch on operations. The Japanese have three representatives on Guinness Mahon's 12-person board.

The news triggered a sharp fall in Guinness Mahon's share price. The stock closed at 42p, down 8p on the day. This compares with the 146p per share paid by Bank of Yokohama. The Japanese group bought its stake for £95m in 1989 in the first significant acquisition of a merchant bank by a bank from Japan. Last year, Guinness Mahon announced losses for the 12 months of £7.5m and cut its dividend.

Japanese group files for protection

By Stefan Wagstyl in Tokyo

SHIZUSHIN Lease, a Japanese financial company with debts of Y255.5bn ($186m), filed for court protection from its creditors yesterday in a further sign of the pressures imposed by high interest rates and weak property markets.

Shizushin, a medium-sized leasing company, will go bankrupt if its creditors fail to agree on a reorganisation plan.

If it goes under, it will be the fourth-largest corporate failure in Japan and the second-biggest this year after Nanatomi, a property developer, which went bankrupt owing Y300bn.

Shizushin would be the first financial company to fail during the squeeze on credit in Japan. The company was founded in 1982 and began by financing the lease of office equipment. It subsequently expanded into property lending.

Its borrowers include a company run by Mr Suemitsu Ito, a property developer connected with Itoman, the trading company which ran into financial difficulties through investment in land. Mr Ito worked for Itoman for eight months until he resigned late last year. During that time, he was responsible for expanding its property investments.

Shizushin, based in Shizuoka, a town west of Tokyo, was established with the help of the Shizuoka Shinkin Bank, a local institution.

Shizuoka Shinkin has a 4.7 per cent stake in Shizushin, but it is not thought to be threatened by the leasing company's difficulties.

Agnelli company lifts Perrier stake

By Haig Simonian in Milan and William Dawkins in Paris

IFI International (Ifint), the Luxembourg-based holding company partly owned by Italy's Agnelli family, has acquired an option to become the largest single shareholder in Exor, the investment group which controls the Perrier mineral water group.

Ifint told the French stock-market authorities yesterday that it could raise its existing 13.5 per cent stake in Exor, to just over 21 per cent. However, a Perrier spokesman said the deal will have no impact on the mineral water group.

It is not known whether Ifint plans to exercise its option, although the mere fact of owning it means the group is considered under French law to have lifted its stake in Exor to above 20 per cent, at which level it has to make an announcement.

If Ifint exercises its option, it will overtake Ms Corinne Mentzelopoulos, whose family is Exor's main shareholder and who now owns 18.6 per cent of the group. However, analysts said this is unlikely to change the Mentzelopoulos' control.

Exor made no comment yesterday and securities analysts confessed to be baffled by the deal. The Agnelli family could be strengthening its French industrial portfolio, which already includes stakes in BSN, the food group, Accor in hotels, and the Pechelbronn holding group, said Mr Sylvain Massot, food and beverages analyst at Morgan Stanley's London office. He thought it very unlikely that Ifint would increase its stake without Exor's agreement.

Ifint paid around FFr700m ($119.5m) for its existing 13.5 per cent share in Exor in January, making it then the group's third biggest shareholder.

It has now acquired options for another 7.86 per cent from Rovida, a Swiss-based holding company and currently the second largest shareholder, which had 18.2 per cent of Exor's stock.

Ifint, 28 per cent of whose ordinary shares are owned by the Agnelli-controlled Istituto Finanziario Industriale (IFI), bought its stake as part of a complex share swap with Ms Mentzelopoulos.

According to Ifint, the option to buy a further 335,000 Exor shares is held through Triffin, an Amsterdam-based holding group it controls. If exercised, the option would raise Ifint's stake in Exor to 21.37 per cent.

Ratners may axe 1,000 jobs in cost cutting

By John Thornhill in London

RATNERS Group, the jewellery chain, will implement a stringent cost-reduction programme this year leading to the loss of up to 1,000 jobs as it attempts to combat recessionary markets in the UK and the US.

Although the company pushed annual pre-tax profits up from £108.22m to £110.05m ($189.3m) before property gains, Ratners' fully-diluted earnings per share fell 9 per cent to 23.6p as cost increases outstripped sales growth.

Mr Gerald Ratner, chairman, said the company had to cut overhead costs and would do so by reducing the headcount by 5 per cent as well as cutting stockholding and distribution costs and trimming some of its guarantees and credit terms.

"It is no good just hibernating like a hedgehog during a recession," he said.

Sales in the year to February 2 topped the £1bn mark for the first time, climbing 24 per cent to £1.11bn.

The results were boosted by the inclusion of Kay Jewelers, the US chain which was bought for £207m last year. Kay, which has been quickly integrated with Ratners' existing Sterling business in the US, contributed £14m to operating profits.

Overall, operating profits rose 3.6 per cent to £134.25m. The UK saw a reduced contribution of £79.74m, against £93.37m, but this was more than offset by the US which added £54.5m against £36.12m.

In the UK, most of Ratners' high street chains registered comparative sales increases. H Samuel produced a 13 per cent gain; Ratners 18 per cent; and Zales and Ernest Jones 19 per cent.

However, Watches of Switzerland, the group's most upmarket chain, was hit by a fall in tourist levels and recorded an 11 per cent slide in sales, while Salisburys, the handbag chain, incurred a loss of £1m.

Salisburys is being substantially pruned from 220 stores to 170 at an exceptional cost of £2m.

An extraordinary charge of £6.74m was also taken as a result of the company's decision to shut its Regent Jewellers chain, which operates 43 stock clearance branches.

Ratners claimed it had increased market share in the UK by 10 per cent to 33 per cent and that it now held 5 per cent of the US market.

Mr Ratner repeated his ambition of grabbing half of the total UK jewellery market – within four years – and 10 per cent of the US market. "With the competition collapsing there is nothing out there to stop us," he predicted.

But he added that at present sales in both the UK and the US were "more or less flat" and that margins would be further squeezed by the company's decision to absorb the recent VAT increase.

A final dividend of 7.6p will lift the annual pay-out to 10p, representing a 5 per cent increase.

● Ratners Group announced that Sir Victor Garland, a non-executive director of the Prudential Corporation, had joined the board as a non-executive director.

Kaufhalle says earnings rise

KAUFHALLE, a unit of Kaufhof Holding, said its 1990 profit was well above 1989 levels, but gave no details, Reuter reports from Cologne.

The German retailer said in a statement its 1990 turnover was DM2.28bn ($1.36bn), up DM422m or 23 per cent from 1989. The rise was largely due to opening 18 shops, Kaufhalle said. Excluding openings, sales rose 8 per cent.

Kaufhalle said the improvement had continued in 1991, with turnover rising by more than 22 per cent.

Fokker plans to build 130-seat airliner

By Ronald van de Krol in Amsterdam

FOKKER, the Dutch aerospace group, aims to complete a feasibility study on developing a new 130-seat airliner by the end of 1991.

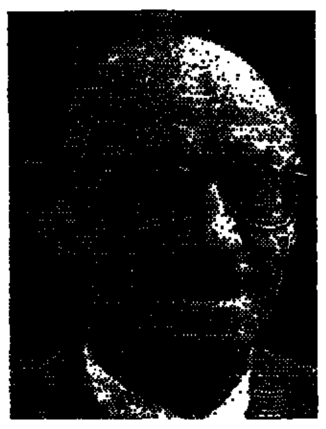
The Dutch company is one of several European aircraft manufacturers to have announced its interest in entering the market for 130-seat aircraft. "Four players in that market segment are too many, but Fokker believes that it must be one of those four," Mr Marten Kuilman, the chairman, said at the annual report presentation.

If Fokker's plans proceed as expected, its proposed 130-seater aircraft would be based largely on its 100-seater Fokker 100. Fokker is also considering the development of an 80-seat aircraft which would be a derivative of its former F28.

In 1990, Fokker's net profit nearly doubled to Fl 83.4m ($42.1m) from Fl 42.4m in 1989. The sharp rise was due mainly to lower financing charges, higher contributions from associated companies, and book profits from divestments.

Despite the steep increase, the company announced in March that it was postponing the resumption of dividend payments. It attributed the delay partly to the sacrifices being asked of its workforce, where jobs are being cut to reduce costs and counter the weakness of the dollar.

Mr Erik Jan Nederkoorn, the group's finance director, said the recent strong rise in the dollar had brought it back to a more "comfortable" level for Fokker.



Daimler pre-tax profits fall 10%

By Andrew Fisher in Frankfurt

DAIMLER-BENZ, the diversified German motor group, said its pre-tax profits fell by around 10 per cent last year, much of the decline caused by currency movements.

Because of a lower tax payment, however, net profits were 6 per cent higher at DM1.8bn ($1.03bn) compared with the comparable figure of DM1.7bn.

It actually announced a net profit of DM6.8bn for 1989, but DM5.1bn of this was due to a change in accounting methods. Daimler gave no pre-tax figure for last year.

Turnover rose by 5 per cent to DM85.5bn.

The company said it would maintain its dividend at DM12 a share.

Mr Edzard Reuter, the chief executive (pictured above), said in February that Daimler had considered raising its dividend until it became clear last autumn that the dollar's weakness – which especially affects Mercedes-Benz car sales in the US – and worsening economic conditions would hold back profits.

Last week, AEG, its electrical and electronics subsidiary, announced a DM205m loss for 1990.

Daimler said a further loss was expected this year as a result of restructuring measures.

The group's Deutsche Aerospace unit has also said it is cutting 1,000 jobs because of lower defence sales.

Banco Santander ahead but Banesto slips back

By Peter Bruce and Tom Burns in Madrid

BANCO SANTANDER, the Spanish commercial bank which owns 10 per cent of Royal Bank of Scotland and which recently bought 13.3 per cent of First Fidelity Bank in the US, said yesterday its first-quarter net consolidated profits increased 21 per cent to Pta20bn ($187m).

Banco Espanol de Credito (Banesto), one of Santander's main Spanish rivals, reported a 17.15 per cent drop in net first-quarter profits for its financial group (which excludes its industrial corporation) to Pta12.99bn, largely because of a sharp fall in extraordinary profits.

Santander, which recently sold control of Electra de Viesgo, a northern electricity utility, for Pta40.5bn, giving it a net profit on the deal of Pta14.8bn, said its cash flow in the first three months of 1991 had increased 65.46 per cent to Pta54.4bn, almost half of which had been made over to provisions and reserves.

Santander said shareholders would receive its second 1990 dividend payment – Pta100 – on April 30, making the total payout for the year 16.22 per cent higher than in 1989.

Banesto's lower results were due to sharply reduced extraordinary income which usually involves disposal of assets. Banesto's financial group made Pta2.9bn from such sales in the first three-quarters of this year against Pta8bn last year.

Gross operating profits for the financial group rose, in contrast, by 12.5 per cent to Pta19.3bn due to a 9.8 per cent rise in the financial margin to Pta42.9bn and to strongly increased income from commissions which were up by 51 per cent to Pta11.6bn. Operating costs were up by 19.5 per cent to Pta35.3bn.

Total consolidated assets of the financial group, which exclude those of Banesto's industrial conglomerate, increased by 26.4 per cent to Pta5,399bn in the first quarter.

A notable feature of this figure was a 29.7 per cent rise in loans to Pta2,606bn. In the first three months of 1990, loans to the private sector were limited to a 10 per cent increase under the government's credit restriction policy.

● Banco Bilbao Vizcaya, Spain's largest bank, said yesterday it had bought a further 6 per cent of the large Catalan water utility, Aguas de Barcelona, to take its stake in the group to 14.5 per cent.

The bank bought the extra stake from the Catalan gas utility, Catalana de Gas. Its efforts to form a giant Catalan energy and resources group were frustrated last year when Repsol, the state-owned oil conglomerate, and La Caixa, the Barcelona savings bank, combined to take control of Catalana de Gas and merge it into Repsol's growing gas interests.

The government, however, has been keen to prevent Aguas de Barcelona falling into French hands and will have actively supported BBV increasing its stake.

San Paolo ready for Spanish expansion

By Haig Simonian in Milan

ISTITUTO Bancario San Paolo di Torino, the big Turin-based bank, is negotiating to buy Banco Catala de Credit, a medium-sized Spanish bank owned by Banco Banesto.

The purchase would substantially boost San Paolo's expansion plans in Spain, where it bought a 35 per cent stake in Banca Matutes, a small 32-branch private bank, last year.

Banco Catala de Credit has 105 branches, 26 of which are around its Barcelona base, and the remainder in Catalonia. It had net profits of L12.3bn ($9.59m) last year. Banca Matutes is concentrated on the Balearic Islands. San Paolo itself last year opened a Madrid branch.

San Paolo could not comment on the likely price for the acquisition, but confirmed talks were under way on a letter of intent.

Separately, the company denied recent Italian press reports that San Paolo had substantially raised its stake in Hambros, the UK merchant bank, following the sale by Baltica, the Danish insurance group, of a 14 per cent stake.

San Paolo's holding has recently risen to about 14.9 per cent from 14.3 per cent, but this was due to the exercise of convertible bond holdings.

● Sasib, the quoted food, packaging and industrial group controlled by Mr Carlo De Benedetti's CIR holding company, raised net profits by 16.6 per cent to L70.2bn from L60.2bn last year.

Total sales jumped by 22 per cent to L619.7bn, with foreign turnover, boosted by acquisitions, surging by 50 per cent to L439.2bn. The company is paying a dividend of L230 for ordinary shares and L250 for its savings shares respectively.

Vard reverses into deficit

By Karen Fossli in Oslo

NORWAY'S Vard shipping group said yesterday that in the first quarter of this year it had plunged into a pre-tax deficit of NKr37.3m ($5.53m), compared with profits of NKr104.4m in the same period of 1990.

Vard said that the poor result was due mainly to a large number of cancellations by customers for Kloster Cruise, the group's cruise unit, during the Gulf war.

Kloster Cruise reversed its 1990 first-quarter NKr67.5m profit into a NKr25.9m loss for the first quarter of this year. The figure includes a currency exchange gain of NKr84.1m.

The group warned that Kloster Cruise's bookings in the second quarter will also be affected by a general decline in the cruise market but suggested that results would improve.

Vard said that the capacity in Royal Viking Line, another cruise operation, is to be reduced by 70 per cent in 1992.

LEGAL NOTICES

WHYTE & SMITH LIMITED

Registered number: 486708
Nature of business: Hosiery Manufacturer
Trade classification: 08
Date of appointment of joint administrative receivers: 9 April 1991
Name of person appointing the joint administrative receivers: National Westminster Bank Plc.
STEPHEN JONATHAN TAYLOR and HUGH ALISTAIR SINCLAIR
Joint Administrative Receivers
(Office holder nos 7821 and 6033) of Cork Gully, Abacus House, 32 Friar Lane, Leicester, LE1 6RA

CLUBS

INTERNATIONAL COMPANIES AND FINANCE

Brazilian steel group plunges into red

By Victoria Griffith in Sao Paulo

USIMINAS, the steel group due to be one of the first companies to be privatised in Brazil this year, announced an inflation-adjusted net loss for last year of NCrz1.5bn, or about $5.3m at today's unofficial rates. In 1989, the group registered an inflation-adjusted net profit of NCrz36bn.

Using another accounting method, the group claimed a net profit of NCrz1.9bn, a result which led Usiminas to claim it was the only steel group in Brazil last year to record a positive result.

The group blamed recession at home and an overvalued cruzeiro for the feeble figures. Demand for steel dropped 30 per cent in Brazil last year, dipping to its lowest level in 13 years. These factors, however, did not exact a heavy toll on gross receipts, which rose in real terms from NCrz129bn in 1989 to NCrz139bn last year.

A bigger problem seemed to be mounting expenditures on debt service. In 1989, Usiminas earned large amounts of interest on its resources but in 1990, the situation had turned around, and led the group to declare a loss on operations of NCrz2.1bn.

This loss was despite what the group referred to as a "rigorous programme to reduce costs".

UIC closes two offices in move to cut costs

UNITED Industrial Corporation (UIC), Singapore's diversified holding company, in the past two months has closed down two of its overseas offices and plans to scale down a third in a cost-cutting move, AP-DJ reports from Singapore.

And "if the price is right," UIC will also dispose of more foreign assets, a UIC official said.

"UIC is in a period of consolidation after swallowing an elephant," the official said, referring to its takeover of Singapore Land last summer. As a result, UIC's group debt stood at more than S$1.4bn (US$788m) at the end of last year.

He said UIC's Perth and Los Angeles offices have been shut down, while the Hong Kong office will be "scaled down". UIC has investments in China.

With its Dallas hotel sold about six months ago, UIC has no significant assets in the US. The UIC official also said that the Perth office, mainly set up to look for investments in equities and real estate, has been "quite quiet since 1987".

In all, some six people were laid off. The Hong Kong office, now staffed with 6 to 10 employees, will be scaled down by natural wastage, the official said. He did not reveal plans for the eventual size of the office.

UIC owns an office building in Tokyo. The UIC official said that this, and the property group's hotel in China, are open to sale at the right price.

The official could not detail the savings from the recent closures.

Cummins sees quarterly operating loss of $34.3m

By Bernard Simon in New York

CUMMINS Engine, one of the world's leading diesel engine makers, suffered a first-quarter operating loss and warned of a further decline in the North American heavy truck market.

Cummins' bottom line was bolstered by various accounting changes, which resulted in net earnings of $17.2m, or $1.02 a share, compared with $8.9m, or 41 cents a share, a year earlier.

But sales slipped to $811.5m from $861.4m, and there was a loss before the accounting changes of $34.3m. A new inventory accounting method and an adjustment to the method of depreciating engine production equipment produced a one-time gain of $26.5m.

The company expects to decide within the next month whether to cut its dividend from the present annual rate of $2.20 a share.

This month Cummins said its second-quarter operating loss would be cut substantially provided production volumes hold, but it warned yesterday that a further drop in the truck market is expected over the next few months. North American heavy-truck output has sunk by 45 per cent since the first quarter of 1989 and by 14 per cent since last summer.

Cummins said the UK truck market and worldwide orders for off-highway vehicles have also weakened "significantly".

The company has laid off another 170 workers at its US heavy-truck engine plants this month, bringing the cuts to 3,800 people, or 14 per cent of the worldwide workforce, in the past months.

San Miguel debt plan overturned

By Greg Hutchison in Manila

A PLAN by San Miguel, the Philippine brewing conglomerate, to issue convertible debt has been voted down by shareholders after the company's former chairman had argued that the issue would prejudice his interests.

The vote at the San Miguel annual meeting on Friday represents another winning round by former chairman, Mr Eduardo Cojuangco, in the fight to reassume a substantial role in the management of San Miguel.

At stake, according to Mr Cojuangco's lawyer, was ultimate control of San Miguel, the Philippines' biggest industrial company.

Under the management's debt plan, shares in San Miguel nominally owned by Mr Cojuangco, but held in trust by the government, would not have qualified for the convertible issue.

Mr Cojuangco's 18 per cent equity stake in San Miguel was taken into guardianship by the Good Government Commission in 1986 because of allegations that the shares were acquired illegally.

Andres Soriano: rejection could hurt company's plans

The shares remain in dispute and were thus unavailable for Friday's shareholder vote. Since the plan involved the eventual issue of 7.5 per cent of San Miguel's outstanding shares, it threatened to dilute seriously Mr Cojuangco's potential shareholding.

Mr Andres Soriano, the chairman of San Miguel, said the company's management believed the 3bn pesos ($110m) convertible debt issue was "in the best interests of the company", and that its rejection "could hurt some of our plans".

The issue, together with 2bn pesos from internally generated sources, was earmarked for an expansion and modernisation programme.

The Good Government Commission holds stakes in 300 Philippine companies pending a determination of whether they represent unlawful proceeds.

Mr Estelito Mendoza, Mr Cojuangco's lawyer, said the decision was likely to have a knock-on effect for another Cojuangco case pending before the Supreme Court.

This relates to shares seized by the commission in the United Coconut Planters Bank, which, if freed, would unlock the bank's indirectly-owned 30 per cent stake in San Miguel.

Along with the 18 per cent stake and residual proxies, this would give Mr Cojuangco effective control of San Miguel together with eight of the 15 seats on its board of directors.

Kao hit by overseas operations

By Stefan Wagstyl in Tokyo

KAO, the Japanese toiletries maker, last year suffered losses in its overseas operations which virtually wiped out the increase in profits made inside Japan.

The group yesterday posted a rise in consolidated pre-tax profits for the year to March of just 0.4 per cent to Y38bn ($274m), compared with an increase of 3.4 per cent to Y40.1bn at the parent company. The parent company accounts for the bulk of Kao's operations within Japan. Six subsidiaries, including the US business, made losses.

The parent company saw sales rise 4.5 per cent to Y570bn. Growth was held back by intense competition in the market for household detergents, where Kao's highly-successful Attack has spawned imitators. Also, Kao made little new headway in hygiene products, including disposable nappies, where it launched New Merries. On a consolidated basis, sales were up 6.7 per cent at Y662bn.

For the current year, Kao forecasts parent company sales of Y585bn, an increase of 2.6 per cent, and pre-tax profits of Y42bn, up 3.4 per cent. Kao said it hoped for increases in sales and profits despite a slow-down in the Japanese economy. It said that because the domestic market for household products was mature it was pouring its energies into developing new markets.

Venezuela may sell 35% of airline overseas

By Joe Mann in Caracas

VENEZUELA, in announcing the conditions under which it will privatise its Viasa international airline, says foreign airlines will be able to buy around 35 per cent of the airline's shares.

The government stipulates that although it plans to sell up to 60 per cent of Viasa, it will keep at least 51 per cent in the Venezuelan hands. It also says airline employees can own up to 20 per cent of Viasa under stock purchase plans.

Viasa, which flies to Europe, the US, Latin America and the Caribbean, made a loss last year. Profits in previous years were due mainly to government export bonuses.

Viasa operates five DC-10 jets (four are owned by the airline, one is leased) and three leased Airbus 300-B4s.

Officials say they plan to complete the privatisation of Viasa by July of this year. Potential bidders must set up consortia that will be able to operate the airline, the government said.

● Petroleos de Venezuela (PDVSA) plans capital investments of $48bn for domestic and international projects by 1996, including direct capital outlays of $34bn by PDVSA itself.

In addition, $14bn is to be invested by overseas subsidiaries, partners in existing joint ventures and private companies which are developing new projects with PDVSA.

PDVSA is one of the world's largest petroleum companies and has oil refining and distribution assets in the US, Germany, Sweden and Belgium. The $34bn in direct investments programmed by PDVSA represents an increase of 36 per cent – or $9bn – over the $25bn investment programme for 1991-96 announced at the end of last year.

In 1990, PDVSA's total turnover topped $23bn. The company has over 60bn barrels in proven reserves of crude oil, the largest in the western hemisphere.

VME plans to invest SKr135m

By Andrew Baxter

VME Group, the construction equipment group owned jointly by Volvo of Sweden and Clark Equipment of the US, plans to invest SKr135m ($21.8m) in its articulated dumptruck business, including SKr80m for a new factory in Sweden.

The investment is one of the very few so far this year in the construction equipment industry, which has been hit by recession in the US and UK. In February VME announced a 10 per cent rise in 1990 operating profits to $79m, against the industry trend and helped by a strong performance in continental Europe.

VME is the world's largest producer of articulated dumptrucks and will be investing the money in its Swedish-based subsidiary VME Articulated Haulers.

Manufacturing will be moved to a new plant near the existing one at Braas, Sweden. VME plans to modernise the dumptruck frames and bodies and reorganise the workforce. Production at the new plant will begin in autumn, 1992.

VME also plans to concentrate production of rigid dumptrucks at its plant in Guelph, Canada. Production at the group's rigid hauler operations in Landskrona, Sweden, will cease at the end of 1992.

High margins lift Mobil 78% in first quarter

By Bernard Simon in New York

UNUSUALLY high refining margins in Europe and the Pacific Rim helped boost Mobil Corp's first-quarter earnings by 78 per cent.

North America's second biggest integrated oil company lifted net earnings to $710m, or $1.73 a share, from $400m, or 94 cents a share, a year earlier.

The 1990 figure included a $28m tax charge from a prior period. Sales climbed by 10 per cent to $16.6bn.

The improved earnings were due largely to the strong performance of several international businesses. Income from marketing and refining soared four-fold to $442m, with non-US operations contributing $342m, compared with $81m a year earlier.

Mobil ascribed the wide international refining margins to a shortage of capacity. Earnings were especially strong in Singapore and in Australia, where Mobil has acquired Exxon's refining and marketing operations.

Natural gas output outside the US rose to record levels, due partly to the cold winter in Europe. On the other hand, North American exploration and production earnings were hit by the unremitting fall in natural gas prices caused by warm weather, weak demand and competition from alternative liquid fuels.

Crude oil prices were about level with a year ago, but some $10 a barrel below the fourth-quarter average.

Mr Allen Murray, the chairman, said that although refining margins have recently narrowed from the peaks earlier this year, "they should continue to support good earnings, although below first-quarter levels". He noted, however, that earnings from petrochemicals have recently come under pressure.

Occidental reaps tax benefits of restructuring

By Bernard Simon in New York

Ray Irani: has taken the scalpel to Occidental

OCCIDENTAL Petroleum has begun to reap the tax benefits of a $2.2bn restructuring charge taken after the death last December of Dr Armand Hammer, who presided over the Los Angeles-based energy and chemicals group for more than half a century.

Net first-quarter earnings were $136m or 45 cents a share, up from $108m (37 cents a share) a year earlier. The latest figure, however, includes a $53m tax benefit from operating loss carryforwards created by last year's restructuring.

These carryforwards, which totalled $1.7bn last December, can be set off against taxes on future operating income and capital gains. They are recorded as an extraordinary item.

Mr Ray Irani, who took over as chairman when Dr Hammer died, has taken the scalpel to Occidental with the aim of concentrating on the core businesses of oil, gas and chemicals. He has put several of Dr Hammer's pet projects on the block, and laid off 1,000 employees. He symbolically signalled the break from the past by moving the annual meeting from Dr Hammer's birthday on May 20 to a date 10 days earlier.

Oil and gas earnings in the first quarter rose 22 per cent to $122m, reflecting higher oil prices and production, higher international natural gas volumes and improved domestic gas liquids prices.

On the other hand, earnings from chemicals dipped by 25 per cent to $139m, as a result, among other things, of higher feedstock prices and lower farm products volumes.

● Olin, the Connecticut-based chemicals and special metals producer, took an $80m charge in the first quarter as part of a restructuring aimed at improving cash flow and profitability.

Other measures include a 10 per cent cut in the salaried workforce and the disposal of several peripheral or unprofitable businesses.

Those being put on the block include industrial phosphates, electronic chemical and interconnect operations, and some small chemical and metal product lines.

The company expects the sale to be complete within the next 18 months.

As a result of the charge, Olin suffered a first-quarter loss of $59m ($2.20 a share), against earnings of $32m ($1.60 a share) a year earlier.

Earnings from continuing operations, before the special charge, were $21m, but the recession pushed sales down by 12 per cent to $561m.

Overseas arms help Avon to 10% rise

By Karen Zagor

AVON Products, the world's biggest maker of cosmetics and toiletries, yesterday turned in a 20 per cent improvement in first-quarter net income.

The result included strong gains from the company's overseas operations offsetting the deteriorating performance of its US business.

For the first three months of 1991, Avon had net income of $18.4m or 16 cents a share against $15.2m or 11 cents a year ago.

Revenues grew 9 per cent to $769.6m from $703.8m.

The 1991 figures include a $7m settlement with Chartwell Associates, the investor group which recently agreed to abstain from launching a proxy fight for increased control of Avon's board for 10 years, after nearly two years of putting consistent pressure on Avon.

Mr James Preston, Avon's chairman, said the company expects a good year in 1991 thanks to its strong international position.

"Avon continues to benefit from having a global portfolio of businesses that minimises the impact of a recession in one country or region," he said.

The New York-based company said pre-tax profits from its international business grew 40 per cent in the quarter on a 25 per cent improvement on sales, led by Europe and the Americas.

In the US, Avon's pre-tax profit fell 12 per cent on a 7 per cent decline in sales

This reflected the continued impact of recession, particularly in the north-east.

Avon, which has been steadily reducing its debt, said debt at the end of the 1991 first quarter was $572.7m, down 18 per cent from $695.9m a year earlier.

Schneider bid for Square D examined by Canada

By Barbara Durr in Chicago

THE Canadian government's Bureau of Competition Policy has begun a formal inquiry into the proposed acquisition of Square D of the US by France's Groupe Schneider.

Both companies, which produce electrical equipment, have significant competing businesses in Canada.

Under Canadian law, an inquiry begins only if there are reasonable grounds to believe an acquisition could substantially prevent or lessen competition in Canada.

Square D has been fighting off Schneider efforts to take it over since February, when Schneider made an unsolicited offer of US$78 per share, or $1.9bn, for the company. Square D wants to remain independent and is looking for third parties with which to make alliances.

Mr Jerre Stead, chairman of Square D, said Schneider's takeover effort "raises substantial questions under the Canadian competition laws as well as under the US anti-trust laws and competition laws of several European countries".

A US District Court is scheduled to consider Square D's allegations that the Schneider acquisition would violate US anti-trust laws on May 13.

Square D is also urging the US Federal Reserve to review the Schneider takeover bid on the grounds that it would violate US banking laws. American bank holding companies are prohibited from owning more than 5 per cent of a non-banking company.

At issue, according to Square D, is the control of Schneider by Paribas and Société Générale, the big French retail bank, which hold 9.7 per cent and 10 per cent, respectively, of the shares of SPEP, which in turn holds a majority interest in Schneider.

US insurance broker ahead

By Nikki Tait

MARSH & McLennan, the world largest insurance broker, yesterday reported firstquarter income of $96.6m after tax, against $94.2m in the same period a year earlier. The increase was scored on total revenues up to $744.1m from $695.7m.

The rise in operating income was slightly larger – up to $171.2m from $161.8m after expenses increased by 7.3 per cent to $572.9m. But interest income was reduced to $6.7m from $7.5m.

Correction
Fred Carr

In early editions of the Financial Times of April 13 a picture of Mr Fred Carr, the chief executive of WI Carr (Investments) was published. The picture should have been of Mr Fred Carr, the chairman of First Executive.

Recession and war cut into profits at Capital Cities/ABC

By Karen Zagor in New York

THE IMPACT of recession on advertising demand and the cost of covering the Gulf war has cut into the profitability of Capital Cities/ABC, one of the three biggest US television networks.

It yesterday unveiled a 38 per cent slump in first-quarter operating income to $120.2m and warned of a possible further decline in second-quarter earnings.

The company owns the ABC radio and television national networks, local television and radio stations and weekly newspapers, including the Fairchild fashion trade publications.

It said first-quarter net income plunged about 45 per cent to $58.6m or $3.50 a share from $106.3m or $6.08 a year earlier on revenues which were essentially unchanged at $1.26bn.

Operating income in the first three months of 1991 was $130.3m, against $211.5m a year ago, while income before taxes dropped 44 per cent to $103.4m from $186.2m.

Capital Cities/ABC's weak first-quarter performance comes on the heels of poor results from CBS and General Electric's NBC broadcasting business, which were also hurt by higher news costs and the very weak advertising market.

Capital Cities/ABC said yesterday there had been a return to more normal business patterns since the end of the Gulf war.

However, the company said levels of advertising demand might not be sufficient to prevent earnings from declining in the second quarter of this year.

Capital Cities/ABC said the operating profits from its television network in the first quarter of 1991 represented a significant decline from the previous year's results.

In the three months ended March 31, revenues from the company's broadcasting operating advanced to $1bn from $992.5m, thanks to gains from the telecast of the Super Bowl and two National Football League (NFL) Wild Card playoff games.

Capital Cities/ABC's publishing operations brought in revenues of $250.6m in the latest quarter, down about 7 per cent from the previous year. Operating income from publishing dropped 24 per cent to $18.4m from $24.3m, with declines in all operating groups.

Abitibi-Price reveals smaller loss of C$5.5m

By Robert Gibbens in Montreal

ABITIBI-PRICE, one of Canada's three biggest integrated pulp and paper groups, yesterday revealed that it had posted a small loss in the first quarter.

It also warned it expected a difficult year because of poor markets, especially in newsprint.

Sales in the period dipped 7.5 per cent to C$726m (US$625m) and the first-quarter loss was C$5.5m or 9 cents a share, against a loss of C$11.3m or 17 cents a year earlier, including a C$13.7m special charge.

During the quarter, Abitibi, controlled by the Reichmann brothers of Toronto, made two disposals for C$53m.

More non-core assets will be sold to reduce debt.

Even the paper distribution and converting businesses, though profitable, will be adversely affected by the recession throughout 1991.

In the first quarter Abitibi lost money on an operating basis in all its activities, except distribution and converted products.

Newsprint production was 444,000 tonnes and groundwood papers were 105,000 tonnes, both around the same level as a year earlier.

● Campeau Corp has sold a 10 year old office building in Montreal to Confederation Life Insurance, raising the total generated by property sales in eastern Canada to about C$500m in the past year.

Nova may split into two

By Robert Gibbens in Montreal

NOVA, a large Canadian energy, pipeline and petrochemicals group, is considering splitting its business into two separate companies, with shareholders maintaining their proportionate interests.

Nova is the main natural gas pipeline operator in Alberta, a provincially-regulated business and hiving off this activity would ease the task of raising new capital.

The other entity would hold the oil and gas and petrochemical interests and raise capital on its own.

Petrochemicals and plastics are subject to big price swings. At present the gas transmission business accounts for more than half Nova's total business.

In 1988 Nova bought Polysar's petrochemical business for well over C$2bn (US$1.7bn) and last year sold the synthetic rubber division for C$1.35bn. Its 43 per cent interest in Husky Oil would be rolled into the new energy and petrochemicals company.

RBC Dominion Securities and Morgan Stanley of New York are advising Nova on the restructuring.

MOST MARKETS HAVE SHOWN A SHARP RECOVERY. BUT WHICH MARKETS? AND HOW BEST TO INVEST?

International investors are facing two important decisions. Which areas show most promise? And when is the right time to buy?

How can the enterprising international investor make the most of this opportunity and, no less crucially, how long will it last?

More specifically, which regions, which countries and which companies are best equipped to recover, stabilise and finally, thrive?

Why do we believe the time is right?

Simply put, you can still buy low, but markets are looking up.

We think now is the right time to invest into the nineties.

But what makes us so optimistic that the traumas of the late eighties are behind us?

The war in the Gulf is over. All over the world, select equity investments are once more beginning to look attractive. But investors should guard against indecision.

Inflation is finally beginning to come under control. Overall company profitability has improved. Balance-sheet ratios have also improved and profit percentages have recovered from the low levels they reached at the start of the eighties.

Since the end of the Gulf war *consumer confidence has risen sharply*, which leads us to believe that world economic growth will take off again.

New investments will be needed to fuel the nineties. Investments for the application of new technologies, investments to improve the economic infrastructure of countries, and not least, investments for the environment. This is true of all countries, but there are certain economies where the prospects for rapid and significant growth are greater.

The breakdown of the communist system in the Eastern Bloc has released a tremendous potential for economic growth in Europe. Both the East and the West will eventually benefit from the developments. And what of the newly developing countries in the Pacific? Or the enormous economic potential of the countries in the Americas?

We firmly believe that the potential for immediate and continued growth in these key areas is enormous. It is just beginning to be tapped. All around the world, these select economies are preparing for lift-off. Will there ever be a better time to invest?

USA: Will you profit as the sleeping giant awakes?

The USA is the largest economic power in the world. (Its gross national product is twice that of Japan's). But the rest of the world, led by Japan, is catching up.

And believe it or not, that's good news.

In short, American business has learned to fight again. Managers have finally got used to the idea that they have to work to win a position on the international market.

They've unquestionably become hungrier. And the present dollar exchange rate is still giving them a tremendous boost.

But there are still unanswered questions.

Will Canada gain from export of energy to the eastern United States? And if the US manufacturing sector is currently exporting 20% of its output, which are the companies exporting at twice that rate?

With discussions under way on a North American free trade zone, which companies in Mexico stand to gain most from access to the US market? And talking of which, how will the Stock Exchange in Mexico develop?

Europe. Can you afford to ignore the potential of the new order?

Europe is a region in which great changes have taken place in recent years. The emergence of a vast common European market, the rapprochement between Western and Eastern Europe and the United Kingdom with the continent of Europe, provide *abundant challenges and opportunities.* The prospects for the region are fascinating.

For example, will the UK gain from entry to the EMS? Will France and Belgium gain from the West German need to supply the new Eastern Länder?

Of course, a great deal depends on whether the countries of Western Europe help in the rebuilding and restructuring in Eastern Europe.

If they do, as they assuredly will, Western European companies, in particular, will benefit hugely from this development phase.

The Far East. Can the region continue its record of growth?

Innovative products such as Walkmans, High Definition Television, memory chips, and inexpensive, reliable cars, have made *Japan* and the Far East the fastest-growing region in the world.

Will similar transformations occur in *Thailand, South Korea* and the *Philippines*? And if they do, which companies are likely to lead that transformation?

Or have Japan and the other newly industrialised countries become too dependent on exports to Europe and the USA? Will Japan be able to continue to defeat the pressure of labour scarcity on wage costs by research and development, and investment in automation? Will restrictions on Taiwanese investment in Southern China be relaxed? How will the economy of the 'Southern China triangle' develop?

And now the most important question of all. Who can you trust to invest your funds prudently?

Clearly, the key to investment success lies in answering these and other questions. Yet few international investors, however well informed, are equipped to deal with such issues.

False modesty aside, the Robeco Group is.

For almost 60 years, the Robeco Group, Europe's largest and most successful investment house has adhered to a long-term, low risk, essentially cautious investment philosophy.

With conspicuous success.

Through our many years of experience and success investing over the long term and our thorough analyses of the market in every region of the world, we are in an excellent position to select shares in those countries, those branches of industry, and finally those companies where the prospects are brightest.

In the current climate, we have taken particular pains to address the questions facing the international investor seeking growth economies.

For more information on how to invest selectively in one or more of the regions described above, and for a fuller picture of the Robeco Group's enviable investment pedigree, write to Robeco Bank (Switzerland) S.A., or fax us on (41) 22 - 41 13 92.

To: The Manager, Robeco Bank (Switzerland) S.A., 16 chemin des Coquelicots, Case Postale 114, CH - 1215 Geneva 15, Switzerland. 22486

Please send me more information on the new regional investments in one of the following languages:

English ☐ German ☐ Dutch ☐ French ☐ *Tick appropriate box*

Mr/Mrs/Miss/Ms ______ Surname and initials ______

Full address ______

Postcode ______ Country ______ Telephone ______

ROBECO BANK (SWITZERLAND) S.A.

The bank that reflects your own values

FT GUIDE TO WORLD CURRENCIES

The table below gives the latest available rates of exchange (rounded) against four key currencies on Monday, April 22, 1991. In some cases the rate is nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Afghanistan	(Afghani)	99.25	58.641	33.1939	42.055
Albania	(Lek)	9.8875	5.8419	3.3068	4.1896
Algeria	(Dinar)	28.85	17.0457	9.6488	12.2245
Andorra	(Fr Fr)	10.0650	5.9468	3.3662	4.2648
	(Sp Peseta)	183.95	108.685	61.5217	77.9449
Angola	(Kwanza)	108.60(1)	64.1654	36.321	46.0169
Antigua	(E Carr $)	4.6005	2.7181	1.5386	1.9493
Argentina	(Austral)	16795.15	9923.28	5617.11	7116.59
Aruba	(Florin)	3.05	1.802	1.02	1.2923
Australia	(Aus $)	2.2085	1.3048	0.7386	0.9358
Austria	(Schilling)	21.015	12.4165	7.0284	8.9046
Azores	(Port Escudo)	257.40	152.083	86.0869	109.068
Bahamas	(Bahama $)	1.6925	1	0.566	0.7171
Bahrain	(Dinar)	0.6439	0.3804	0.2153	0.2728
Balearic Is	(Sp Peseta)	183.95	108.685	61.5217	77.9449
Bangladesh	(Taka)	59.20	34.9778	19.7993	25.0847
Barbados	(Barb $)	3.4275	2.0251	1.1463	1.4523
Belgium	(Belg Fr)	61.45	36.3072	20.5518	26.0381
Belize	(B $)	3.4080	2.0135	1.1397	1.444
Benin	(CFA Fr)	503.25	297.341	168.311	213.242
Bermuda	(Bermudian $)	1.6925	1	0.566	0.7171
Bhutan	(Ngultrum)	34.40	20.3249	11.505	14.5762
Bolivia	(Boliviano)	5.9980	3.5438	2.006	2.5415
Botswana	(Pula)	3.4375	2.031	1.1496	1.4565
Brazil	(Cruzeiro)	435.15	257.105	145.535	184.386
Brunei	(Brunei $)	3.0340	1.7926	1.0147	1.2855
Bulgaria	(Lev)	39.87	23.5568	13.3344	16.894
Burkino Faso	(CFA Fr)	503.25	297.341	168.311	3.242
Burma	(Kyat)	11.4572	6.7693	3.8318	4.8547
Burundi	(Burundi Fr)	303.50	179.321	101.505	128.602
Cambodia	(Riel)	783.85	463.131	262.157	332.14
Cameroon	(CFA Fr)	503.25	297.341	168.311	213.242
Canada	(Canadian $)	1.9630	1.1598	0.6565	0.8317
Canary Is	(Sp Peseta)	183.95	108.685	61.5217	77.9449
Cp. Verde	(CV Escudo)	122.85	72.5849	41.0869	52.056
Cayman Is	(CI $)	1.4145	0.8357	0.473	0.5993
Cent.Afr. Rep	(CFA Fr)	503.25	297.341	168.311	213.242
Chad	(CFA Fr)	503.25	297.341	168.311	213.242
Chile	(Chilean Peso)	585.65	346.027	195.87	248.157
China	(Renminbi Yuan)	9.2560(4)	5.4688	3.0956	3.922
Colombia	(Col Peso)	1026.05	606.233	343.161	434.767
Comoros	(CFA Fr)	503.25	297.341	168.311	213.242
Congo (Brazz)	(CFA Fr)	503.25	297.341	168.311	213.242
Costa Rica	(Colon)	200.80	118.641	67.1571	85.0847
Côte d'Ivoire	(CFA Fr)	503.25	297.341	168.311	213.242
Cuba	(Cuban Peso)	1.3575	0.802	0.454	0.5752
Cyprus	(Cyprus £)	0.8210	0.485	0.2745	0.3478
Czechoslovakia	(Koruna)	50.35c	29.7488	16.8394	21.3347
		52.20t	30.8419	17.4581	22.1186
Denmark	(Danish Kroner)	11.3825	6.7252	3.8068	4.823
Djibouti Rep	(Djib Fr)	301.0	177.843	100.669	127.542
Dominica	(E Carrib $)	4.6005	2.7181	1.5386	1.9493
Dominican Rep	(D Peso)	21.75	12.8508	7.2742	9.2161
Ecuador	(Sucre)	1779.70o	1051.52	595.217	754.11
		1645.40a	972.171	550.301	697.203
Egypt	(Egyptian £)	5.45	3.22	1.8227	2.3093
El Salvador	(Colon)	13.6340	8.0555	4.5598	5.7771
Equat'l Guinea	(CFA Fr)	503.25	297.341	168.311	213.242
Ethiopia	(Ethiopian Birr)	3.5015	2.0688	1.171	1.4836
Falkland Is	(Falk £)	1.00	0.5908	0.3344	0.4237
Faroe Is	(Danish Kroner)	11.3825	6.7252	3.8068	4.823
Fiji Is	(Fiji $)	2.5480	1.5054	0.8521	1.0796
Finland	(Markka)	6.9695	4.1178	2.3309	2.9531
France	(Fr)	10.0650	5.9468	3.3662	4.2648
Fr. Cty/Africa	(CFA Fr)	503.25	297.341	168.311	213.242
Fr. Guiana	(Local Fr)	10.0650	5.9468	3.3662	4.2648
Fr. Pacific Is	(CFP Fr)	182.0	107.533	60.8695	77.1186
Gabon	(CFA Fr)	503.25	297.341	168.311	213.242
Gambia	(Dalasi)	12.9675	7.6617	4.3369	5.4947
Germany	(D-Mark)	2.9900	1.7666	1	1.2669

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Ghana	(Cedi)	624.35	368.892	208.813	264.555
Gibraltar	(Gib £)	1.00	0.5908	0.3344	0.4237
Greece	(Drachma)	323.05	190.871	108.043	136.886
Greenland	(Danish Krone)	11.3825	6.7252	3.8068	4.823
Grenada	(E Carr $)	4.6005	2.7181	1.5386	1.9493
Guadaloupe	(Local Fr)	10.0650	5.9468	3.3662	4.2648
Guam	(US $)	1.6925	1	0.566	0.7171
Guatemala	(Quetzal)	8.5115	5.0289	2.8466	3.6065
Guinea	(Fr)	1056.50a	624.225	353.344	447.669
		511.20n	302.038	170.97	216.61
Guinea-Bissau	(Peso)	1107.60	654.417	370.436	469.322
Guyana	(Guyanese $)	196.40	116.041	65.6856	83.2203
Haiti	(Gourde)	8.52	5	2.8494	3.6101
Honduras	(Lempira)	9.4560	5.587	3.1625	4.0067
Hong Kong	(HK $)	13.2840	7.8487	4.4428	5.6288
Hungary	(Forint)	131.70	77.8138	44.0468	55.805
Iceland	(Icelandic Krona)	104.35	61.6543	34.8996	44.2161
India	(Indian Rupee)	34.40	20.3249	11.505	14.5762
Indonesia	(Rupiah)	3332.50	1968.98	1114.55	1412.08
Iran	(Rial)	118.00	69.7193	39.4648	50
Iraq	(Iraqi Dinar)	0.5935	0.3506	0.1984	0.2514
Irish Rep	(Punt)	1.1165	0.6596	0.3734	0.473
Israel	(Shekel)	3.8850	2.2954	1.2993	1.6461
Italy	(Lira)	13.8025	8.155	4.6162	5.8485
Jamaica	(Jamaican $)	13.8025	8.155	4.6162	5.8485
Japan	(Yen)	236.00	139.439	78.9297	100
Jordan	(Jordanian Dinar)	1.1110	0.6564	0.3715	0.4707
Kenya	(Kenya Shilling)	46.25	27.3264	15.4682	19.5974
Kiribati	(Australian $)	2.2085	1.3048	0.7386	0.9358
Korea North	(Won)	1.6530	0.9766	0.5528	0.7004
Korea South	(Won)	1242.75	734.269	415.635	526.589
Kuwait ♦	(Kuwaiti Dinar)				
Laos	(New Kip)	1192.80	704.756	398.93	505.424
Lebanon	(Lebanese £)	1625.50	960.414	543.645	688.771
Lesotho	(Maloti)	4.7550	2.8094	1.5903	2.0148
Liberia	(Liberian $)	1.6925	1	0.566	0.7171
Libya	(Libyan Dinar)	0.4920	0.2906	0.1645	0.2084
Liechenstein	(Swiss Fr)	2.5050	1.48	0.8377	1.0614
Luxembourg	(Lux Fr)	61.45	36.3072	20.5518	26.0381
Macao	(Pataca)	13.7280	8.111	4.5913	5.8169
Madagascar	(MG Fr)	2961.75	1749.93	990.552	1254.98
Madeira	(Port Escudo)	257.40	152.083	86.0869	109.068
Malawi	(Kwacha)	4.7795	2.8239	1.5984	2.0252
Malaysia	(Ringgit)	4.7005	2.7772	1.572	1.9917
Maldive Is	(Rufiya)	16.9325	10.0044	5.663	7.1747
Mali Rep	(CFA Fr)	503.25	297.341	168.311	213.242
Malta	(Maltese £)	0.5710	0.3373	0.1909	0.2419
Martinique	(Local Fr)	10.0650	5.9468	3.3662	4.2648
Mauritania	(Ouguiya)	131.9750	77.9763	44.1387	55.9216
Mauritius	(Maur Rupee)	26.70	15.7754	8.9297	11.3135
Mexico	(Mexican Peso)	5109.20d	3018.73	1708.76	2164.92
		5083.00a	3003.25	1700	2153.81
Miquelon	(Local Fr)	10.0650	5.9468	3.3662	4.2648
Monaco	(French Fr)	10.0650	5.9468	3.3662	4.2648
Mongolia	(Tugrik)	5.7175	3.3781	1.9122	2.4226
Montserrat	(E Carr $)	4.6005	2.7181	1.5386	1.9493
Morocco	(Dirham)	13.5010	7.9769	4.5153	5.7207
Mozambique	(Metical)	2331.15	1377.34	779.649	987.775
Namibia	(S A Rand)	4.7550	2.8094	1.5903	2.0148
Nauru Is	(Australian $)	2.2085	1.3048	0.7386	0.9358
Nepal	(Nepalese Rupee)	52.99	31.3087	17.7224	22.4533
Netherlands	(Guilder)	3.3650	1.9881	1.1254	1.4258
N'nd Antilles	(A/Guilder)	3.05	1.802	1.02	1.2923
New Zealand	(NZ $)	2.9085	1.7184	0.9727	1.2324
Nicaragua	(Gold Cordoba)	8.52	5.0339	2.8494	3.6101
Niger Rep	(CFA Fr)	503.25	297.341	168.311	213.242
Nigeria	(Naira)	15.9325	9.4135	5.3285	6.751
Norway	(Nor. Krone)	11.5850	6.8449	3.8745	4.9088
Oman	(Rial Omani)	0.6605	0.3902	0.2209	0.2798

COUNTRY		£ STG	US $	D-MARK	YEN (X 100)
Pakistan	(Pak. Rupee)	39.20	23.161	13.1103	16.6101
Panama	(Balboa)	1.6925	1	0.566	0.7171
Papua New Guinea	(Kina)	1.6435	0.971	0.5496	0.6963
Paraguay	(Guarani)	2256.85	1333.44	754.799	956.292
Peru	(New Sol)	1.10	0.6499	0.3678	0.4661
Philippines	(Peso)	46.50	27.4741	15.5518	19.7033
Pitcairn Is	(£ Sterling)	1.00	0.5908	0.3344	0.4237
	(NZ $)	2.9085	1.7184	0.9727	1.2324
Poland	(Zloty)	16562.0	9785.52	5539.13	7017.8
Portugal	(Escudo)	257.40	152.083	86.0869	109.068
Puerto Rico	(US $)	1.6925	1	0.566	0.7171
Qatar	(Riyal)	6.2435	3.6889	2.0881	2.6455
Reunion Is. de la	(F/Fr)	10.0650	5.9468	3.3662	4.2648
Romania	(Leu)	105.60(3)	62.3929	35.3177	44.7457
Rwanda	(Fr)	224.15	132.437	74.9665	94.9788
St Christopher	(E Carr $)	4.6005	2.7181	1.5386	1.9493
St Helena	(£)	1.00	0.5908	0.3344	0.4237
St Lucia	(E Carr $)	4.6005	2.7181	1.5386	1.9493
St Pierre	(French Fr)	10.0650	5.9468	3.3662	4.2648
St Vincent	(E Carr $)	4.6005	2.7181	1.5386	1.9493
San Marino	(Italian Lira)	2206.50	1303.69	737.96	934.958
Sao Tome	(Dobra)	256.80	151.728	85.8862	108.814
Saudi Arabia	(Riyal)	6.4320	3.8002	2.1511	2.7254
Senegal	(CFA Fr)	503.25	297.341	168.311	213.242
Seychelles	(Rupee)	9.10	5.3766	3.0434	3.8559
Sierra Leone	(Leone)	374.90	221.507	125.385	158.856
Singapore	($)	3.0340	1.7926	1.0147	1.2855
Solomon Is	($)	4.6835	2.7672	1.5663	1.9845
Somali Rep	(Shilling)	4464.50	2637.81	1493.14	1891.74
South Africa	(Rand)	4.7550	2.8094	1.5903	2.0148
		5.6615	3.345	1.8934	2.3989
Spain	(Peseta)	183.95	108.685	61.5217	77.9449
Spanish Ports in N Africa	(Sp Peseta)	183.95	108.685	61.5217	77.9449
Sri Lanka	(Rupee)	69.50	41.0635	23.2441	29.4491
Sudan Rep	(£)	7.6680o	4.5305	2.5645	3.2491
		19.5110g	11.5279	6.5254	8.2673
Surinam	(Guilder)	3.0415	1.797	1.0172	1.2887
Swaziland	(Lilangeni)	4.7550	2.8094	1.5903	2.0148
Sweden	(Krona)	10.6125	6.2703	3.5493	4.4968
Switzerland	(Fr)	2.5050	1.48	0.8377	1.0614
Syria	(£)	35.7840	21.1426	11.9678	15.1627
Taiwan	($)	46.45	27.4446	15.5351	19.6822
Tanzania	(Shilling)	345.05	203.87	115.401	146.208
Thailand	(Baht)	43.50	25.7016	14.5484	18.4322
Togo Rep	(CFA Fr)	503.25	297.341	168.311	213.242
Tonga Is	(Pa Anga)	2.2085	1.3048	0.7386	0.9358
Trinidad/Tobago	($)	7.2420	4.2788	2.422	3.0686
Tunisia	(Dinar)	1.66	0.9807	0.5551	0.7033
Turkey	(Lira)	6750.50(2)	3988.48	2257.69	2860.38
Turks & Caicos	(US $)	1.6925	1	0.566	0.7171
Tuvalu	(Australian $)	2.2085	1.3048	0.7386	0.9358
Uganda	(New Shilling)	1108.50	654.948	370.736	469.703
U A E	(Dirham)	6.4210	3.7937	2.1474	2.7207
United Kingdom	(£)	1.00	0.5908	0.3344	0.4237
United States	(US $)	1.6925	1	0.566	0.7171
Uruguay	(Peso)	3134.25	1851.85	1048.24	1328.07
USSR	(Rouble)	1.0410o	0.615	0.3481	0.4411
		3.1230c	1.8451	1.0444	1.3233
Vanuatu	(Vatu)	188.45	111.344	63.0267	79.8516
Vatican	(Lira)	2206.50	1303.69	737.96	934.958
Venezuela	(Bolivar)	93.3545	55.1577	31.2222	39.5569
Vietnam	(Dong)	12882.25	7611.37	4308.44	5458.58
Virgin Is-British	(US $)	1.6925	1	0.566	0.7171
Virgin Is-US	(US $)	1.6925	1	0.566	0.7171
Western Samoa	(Tala)	3.9480	2.3326	1.3204	1.6728
Yemen	(Rial)	20.5330	12.1317	6.8672	8.7004
Yemen PDR	(Dinar)	0.7855	0.4641	0.2627	0.3328
Yugoslavia	(Dinar)	38.9140(5)	22.992	13.0147	16.4889
Zaire Rep	(Zaire)	6484.0	3831.02	2168.56	2747.46
Zambia	(Kwacha)	93.35	55.156	31.2207	39.555
Zimbabwe	($)	5.0780	3.0002	1.6983	2.1516

Special Drawing Rights April 19, 1991 United Kingdom £0.771510 United States $1.34667 Germany D Mark 2.31183 Japan Yen185.908
European Currency Unit Rates April 22, 1991 United Kingdom £0.689774 United States $1.17468 Germany D Mark 2.06662 Japan Yen163.481

Abbreviations: (a) Free rate; (b) Banknote rate; (c) Commercial rate ; (d) Controlled rate; (e) Essential imports; (g) Financial rate; (h) Exports; (i) Non commercial rate; (j) Business rate; (k) Buying rate; (l) Luxury goods; (m) Market rate; (n) Public transaction rate; (o) Official rate; (p) preferential rate; (q) convertible rate; (r) parallel rate; (s) Selling rate; (t) Tourist rate (u) Currencies fixed against the US Dollar;
Some data supplied by Bank of America, Economics Department, London Trading Centre. Enquiries: 071 634 4360/5.
Monday, April 22, 1991

(1) Angola Kwanza devalued to 60 to the US Dollar, March 18. (2) Turkey revalued by 14%, March 26. (3) Romanian Leu devalued 42%, April 8. (4) China Yuan devalued 0.95%, April 10. (5) Yugoslav Dinar devalued 31%, April 19.

INTERNATIONAL CAPITAL MARKETS

German bonds tumble as election gloom deepens

By **Simon London** in London and **Patrick Harverson** in New York

GERMAN government bonds opened sharply lower yesterday as the market reacted to the defeat of the ruling Christian Democratic Party in state elections in the Rhineland Palatinate.

The bund futures contract on the London International Financial Futures Exchange fell to 84.98 during the morning, against Friday's close of 85.27. However, the market showed resilience in later trading and the contract closed at 85.15.

The benchmark 10 per cent government bond maturing 2001 closed on a yield of 8.44 per cent, down from an opening level of 8.38 per cent.

The election defeat gives the opposition Social Democrats an overall majority in the Bundesrat, the upper house of the German parliament.

The Bundesrat can block any legislation which affects the financing of the regional länder (such as planned VAT increases and reform of the corporate tax structure) and any moves to change the way in which the regions are administered. The gloom was increased by the weakness of the D-Mark on the foreign exchange market against the dollar. The US currency opened at around DM1.74 but fell back to trade at around DM1.7640 in late afternoon.

There are fears that the strong dollar could increase import prices, adding to inflationary pressures in the domestic economy.

Any signs of additional inflationary pressure would be countered by tighter monetary conditions. Fears of further tightening by the Bundesbank suppressed bond prices at the shorter maturities end more than at the 10-year maturity.

■ UK government bond prices showed little reaction to retail sales figures for March which pointed to a sharp upturn in consumer expenditure.

The benchmark 11¾ per cent government bond issue maturing 2003/2007 opened at 110⅝ and closed just ⅛ down on the day, for a yield of 10.22 per cent.

Figures showing retail sales growth of 3.7 per cent for March over the previous month were dismissed as a freak by analysts.

Most had predicted a month-on-month upturn of between 0.3 per cent and 0.7 per cent. The unexpected increase was blamed on a rush by consumers to buy goods before the new rate of VAT (17.5 per cent against 15 per cent at the old rate) came into effect on April 1. Elsewhere, the evidence remains mixed. Money supply figures on Friday showed M0, the narrow measure of notes and coins in circulation, growing at an annual rate of 2.7 per cent. Yet bank lending was recorded at an all-time low.

■ JAPANESE government bonds fell back during Tokyo trading as the yen continued to depreciate against the dollar on the foreign exchange markets.

The benchmark government bond issue No129 closed in Tokyo on a yield of 6.725 per cent, against a close of 6.705 per cent on Friday. In London trading the 129 slipped further for a yield of 6.73 per cent by late afternoon.

Trading remained focused on the foreign exchange market, where the dollar continued to move higher against the major currencies, including the yen. The US currency opened at Y138.75 and pressed ahead to around Y139.30 by the close of London trading.

The strength of the dollar will, if sustained, increase the cost of many imported goods into Japan. This could delay any easing of monetary conditions by the Bank of Japan later this year.

Tomorrow, the government is expected to issue Y800bn of 10-year securities, with a coupon of either 6.7 per cent or 6.8 per cent.

■ IN THE absence of a lead from economic news, US government bond prices edged lower yesterday morning in light trading.

By midday the benchmark 30-year Treasury issue was down ⅛ at 95⅞ to yield 8.259 per cent. The two-year note was also slightly lower, down 1/32 at 100¼, yielding 7.034 per cent.

The market is resigned to the fact that the Federal Reserve is not going to cut interest rates in the near future. The sell-off that came in the wake of the Fed's inaction is complete, and yesterday's weakness was primarily a technical move ahead of the two-year and five-year note auctions due on Wednesday and Thursday this week, said dealers.

In the money markets the Fed intervened via overnight matched sales agreements to drain reserves from the system and exert an upward pressure on the Fed funds rate. The Fed's target for the rate remains 6 per cent, and yesterday Fed funds were trading just below it at 5¾ per cent.

BENCHMARK GOVERNMENT BONDS

		Coupon	Red Date	Price	Change	Yield	Week ago	Month ago
UK GILTS		13.500	08/92	103-21	-03/32	10.61	10.60	10.58
		9.000	03/00	93-10	-03/32	10.16	10.07	10.11
		9.000	10/08	92-22	-02/32	9.86	9.84	9.89
US TREASURY *		7.750	02/01	97-18	-02/32	8.11	7.93	8.16
		7.875	02/21	95-23	-05/32	8.26	8.11	8.35
JAPAN	No 119	4.800	6/99	86.0874	-0.043	7.11	7.11	6.87
	No 129	6.400	03/00	98.1338	-0.109	6.74	6.71	6.56
GERMANY		9.000	01/01	103.6500	-0.150	8.44	8.31	8.46
FRANCE	BTAN	9.000	02/96	99.5392	-0.078	9.10	9.00	9.20
	OAT	9.500	01/01	103.6900	-0.120	8.90	8.80	9.08
CANADA *		9.750	06/01	100.0600	-0.460	9.74	9.43	9.69
NETHERLANDS		8.500	03/01	99.1400	-0.220	8.63	8.49	8.71
AUSTRALIA		13.000	07/00	111.3095	-0.125	11.01	11.02	11.34
BELGIUM		10.000	06/00	104.7500	-0.200	9.20	8.90	9.12

London closing. *denotes New York morning session
Yields: Local market standard. Prices: US, UK in 32nds., others in decimal
Technical Data/ATLAS Price Sources

FT/AIBD INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Latest prices at 6:35 pm on April 22

U.S. DOLLAR STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
ABBEY NATIONAL 8 7/8 93	150	101½	102		7.97
ALBERTA PROVINCE 9 3/8 95	600	103½	103¾		8.39
AUSTRIA 8 1/2 00	400	98¼	99	-¼	8.72
BANK OF TOKYO 8 3/8 96	100	98¾	99¼		8.69
BELGIUM 9 1/8 92	490	102	102⅜		7.51
BFCE 7 3/4 97	150	97⅝	98	-⅛	8.27
BNP 8 5/8 94	300	101½	102	-⅛	8.02
BP CAPITAL 9 5/8 93	150	102⅝	103⅛	-⅛	8.06
CANADA 9 96	1000	103¼	103½	-⅛	8.18
CARCO 9 1/4 96	650	98⅞	99⅜	-⅛	9.51
CCCE 9 1/4 95	300	103⅝	103⅞		8.10
COUNCIL EUROPE 8 96	100	98⅛	98½	-⅛	8.44
CREDIT FONCIER 9 1/2 99	300	104¼	104½	-⅛	8.72
DENMARK 0 98	250	54⅞	55⅜	-⅛	8.58
DENMARK 8 1/4 94	150	100⅝	101	-⅛	8.00
ECSC 8 1/4 96	193	99⅞	100⅛	-⅛	8.32
EEC 7 1/4 93	250	99⅝	100		7.45
EIB 7 3/4 96	250	97⅞	98¼	-⅛	8.26
EIB 9 1/4 97	1000	103	103⅜	-⅛	8.61
ELEC DE FRANCE 9 98	200	102¼	102⅝	-⅛	8.55
EUROFIMA 9 1/4 96	100	102¼	103	-⅛	8.66
EXPORT DEV CORP 9 1/2 98	150	104½	104⅞	-⅛	8.62
FINLAND 7 7/8 97	200	96⅞	97¼		8.69
FINNISH EXPORT 9 3/8 95	200	103⅜	103⅞		8.42
FORD MOTOR CREDIT 9 1/2 93	300	102⅝	103⅛		8.26
GEN ELEC CAPITAL 9 3/8 96	300	103⅞	104¼		8.40
GMAC 9 1/8 96	200	101¼	101¾	+⅛	8.79
HALIFAX 9 1/2 93	200	102⅞	103⅜	-⅛	8.04
IBM WORLD TRADE 7 5/8 93	150	98½	99⅜	-⅛	8.26
IND BK JAPAN FIN 7 7/8 97	200	96⅛	96⅝	-⅛	8.73
INTER AMER DEV 7 5/8 96	200	96½	96⅞		8.44
ITALY 8 1/2 94	1500	101⅝	101⅞	-⅛	8.01
JAPAN DEV BK 8 94	150	100⅜	100⅞	+⅛	7.80
KANSAI ELEC PWR 10 96	350	104½	105	-⅛	8.83
LTCB 8 5/8 93	150	101⅛	101½		7.94
NEW ZEALAND 8 93	100	100	100⅜	-⅛	7.98
NIPPON CRED BK 9 3/4 93	150	103¼	103⅞	-⅛	8.20
NIPPON TEL & TEL 9 3/8 95	200	103¾	104¼		8.19
NORDIC INV BANK 9 93	200	102⅝	102⅞	-⅛	7.75
ONTARIO HYDRO 11 5/8 94	200	108¾	109¼	-⅛	8.18
OSTER KONTROLLBANK 8 1/8 93	200	101	101⅜		7.53
PETRO-CANADA 7 1/4 96	200	95	95⅜	-⅛	8.50
PRUDENTIAL RLTY SECS 0 99	365.216	50⅛	50⅜		9.31
QUEBEC HYDRO 9 3/4 98	150	103⅞	104	-⅛	9.09
QUEBEC PROV 9 98	200	99⅞	100½	-⅛	9.02
SAINSBURY 9 1/8 96	150	101⅛	101⅞	-⅛	8.77
SAS 10 99	200	99⅞	100⅜		10.04
SBAB 9 1/2 95	500	103⅞	104		8.37
STATE BK STH AUST 9 1/4 93	100	101⅞	102¼	-⅛	8.13
SUMITOMO BK CAP MKT 9 3/8 93	150	102⅝	103		8.17
SWEDEN 8 1/8 94	150	100	100⅜	-⅛	8.11
SWEDISH EXPORT 9 5/8 93	100	103¼	103⅝		7.64
TOKYO METROPOLIS 8 1/4 96	200	99⅛	99⅜	-⅛	8.41
WORLD BANK 8 3/8 99	1500	99½	99⅞	-⅛	8.64
WORLD BANK 8 3/4 97	1500	102¼	102½	-⅛	8.42
XEROX CORPN 8 3/8 96	100	95¾	97	+½	9.39

DEUTSCHE MARK STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
ASIAN DEV BANK 8 94	200	98¼	98¾		8.59
AUSTRIA 6 98	400	85½	85⅞	-2⅞	8.97
CNT 6 1/8 98	200	84⅞	85⅜		8.97
CREDIT FONCIER 6 3/4 99	500	88	88¼	+⅛	8.92
DEUTSCHE BK FIN 5 5/8 96	750	88	88		8.63
EEC 5 3/8 93	300	93⅛	93⅜		9.58
EIB 6 1/8 96	300	88	88⅜	-1½	9.11
EIB 6 7/8 95	300	93⅜	93⅝	+⅛	8.67
EUROFIMA 6 1/4 98	400	87⅜	87⅝		8.98
FELDMUEHLE FINANCE 8 99	200	96	96	-⅛	8.66
FERRO DEL STAT 5 3/8 93	500	94⅛	94⅜		9.00
IND BK JAPAN FIN 5 5/8 96	200	87⅜	87⅞	+⅛	8.78
INTER AMER DEV 7 1/4 99	300	93	93	+⅛	8.46
LUFTHANSA INT FIN 5 7/8 98	500	85⅛	85⅜		8.68
QUEBEC HYDRO 6 3/4 99	300	87¼	87½	-	9.07
SWEDEN 6 1/8 98	300	88⅛	88⅜		8.44
WORLD BANK 0 15	2000	16⅜	16⅝	+⅛	7.51
WORLD BANK 5 3/4 96	300	87¼	87½	-1⅜	9.08
WORLD BANK 7 1/8 95	500	94⅛	94⅜	-1½	8.94

SWISS FRANC STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
ASIAN DEV BANK 6 10	100	93	93½		6.65
AUSTRIA 4 5/8 98	100	90	91	+⅛	6.48
CHUJITSUYA 7 3/4 95	50	102	103		7.18
COUNCIL EUROPE 4 3/4 98	250	90	90¼		6.62
EEC 5 1/2 00	100	91½	92½	+½	6.72
EIB 5 3/4 93	100	97⅞	98⅜		6.73
ELEC DE FRANCE 7 1/4 06	100	104½	104¾		6.75
FINLAND 5 3/8 95	150	95½	96½		6.54
GENERAL MOTORS 7 1/2 95	100	102⅞	103½	+½	6.75
JAPAN DEV BK 5 1/2 94	100	96½	97	-⅛	6.90
NEW ZEALAND 4 7/8 99	200	89	89½	-⅛	6.73
QUEBEC HYDRO 5 08	100	80½	81	+⅛	7.00
SKANDINAVISKA ENSK 6 1/2 95	100	98⅞	99½	-½	6.96
WORLD BANK 5 03	150	86	87		6.70
WORLD BANK 7 1/4 92	100	100½	101¼		6.78

YEN STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
AUSTRIA 4 3/4 94	30000	94¼	94½		7.12
CANADA 4 3/8 92	80000	96½	97		7.34
CREDIT FONCIER 5 1/4 94	20000	93⅞	94⅛	-⅛	7.24
DENMARK 7 95	40000	99⅞	100¼	-⅛	7.03
EIB 4 5/8 94	40000	93⅜	93⅝		7.12
GENERAL ELECTRIC 5 3/4 93	35000	96⅞	97⅛		7.60
INTER AMER DEV 7 1/4 00	30000	102⅝	102⅞	-⅛	6.89
ITALY 5 3/4 92	150000	98⅝	99		7.33
KANSAI ELEC PWR 4 5/8 94	60000	92⅞	93⅛		7.34
NIPPON TEL & TEL 5 7/8 96	50000	95½	95⅞	-⅛	6.89
NORWAY 5 1/8 95	50000	93⅝	93⅞		7.03
SWEDEN 5 5/8 95	20000	94½	95	-⅛	7.10
WORLD BANK 6 3/4 00	50000	99⅝	99⅞	-⅛	6.80

OTHER STRAIGHTS	Issued	Bid	Offer	Chg. day	Yield
BAYERISCHE VEREINS INT 7 94 LFr	600	92¼	93⅛	-⅛	9.68
KREDIETCORP 7 93 LFr	1000	94½	95½	-⅛	9.76
WORLD BANK 8 96 LFr	1000	96	97	+⅛	9.03
ALBERTA PROVINCE 10 92 C$	500	99⅞	100	-⅛	10.15
BCE INC 9 5/8 93 C$	300	98⅞	99⅜	-⅛	10.26
BELL CANADA 10 5/8 99 C$	150	99⅝	100⅛	-⅛	10.68
BRITISH COLUMBIA 9 1/4 93 C$	150	98⅞	99⅜		9.91
EIB 10 1/8 98 C$	130	100⅜	100⅞	-⅛	10.04
FORD CREDIT CANADA 10 94 C$	100	97⅞	98¼	-⅛	10.80
GENERAL ELECT CAP 10 1/4 93 C$	175	100⅜	101	-⅛	10.01
MONTREAL TRUSTCO 8 1/2 92 C$	100	97⅞	98¼	-⅛	10.89
ONTARIO HYDRO 10 7/8 99 C$	500	101⅛	101⅝	-⅛	10.63
QUEBEC PROV 10 1/2 98 C$	200	98⅞	99⅜	-⅛	10.75
ROYAL TRUSTCO 10 1/4 93 C$	100	98⅞	99⅜	-⅛	10.99
SWEDEN 9 3/4 93 C$	250	99⅞	100⅛	-⅛	9.95
BELGIUM 9 1/8 96 Ecu	1250	100⅛	100½		9.02
CNT 7 3/8 93 Ecu	250	95⅞	96⅛	+⅛	9.80
CREDIT LYONNAIS 9 96 Ecu	125	96⅞	97⅜	-⅛	9.84
DENMARK 7 5/8 96 Ecu	250	91⅛	92⅛	+⅛	9.93
EEC 7 5/8 94 Ecu	200	96⅛	96⅝		9.22
EIB 10 97 Ecu	1125	105	105⅛		8.85
ITALY 10 3/4 00 Ecu	1000	109⅛	109⅜	-⅛	9.19
UNITED KINGDOM 9 1/8 01 Ecu	2750	100⅜	100⅞	-⅛	9.02
BMW FINANCE 14 1/2 92 A$	100	101⅞	102⅛	-⅛	12.52
COUNCIL EUROPE 13 93 A$	50	100⅞	101⅛	-⅛	12.62
EKSPORTFINANS 12 3/8 95 A$	75	102⅛	102⅝		11.67
FORD CRED AUST 13 93 A$	50	99⅞	100⅜	-⅛	13.19
ICI 15 1/2 92 A$	100	103⅛	103⅝	+⅛	12.10
MCDONALDS CANADA 15 95 A$	100	107⅞	108⅜	-⅛	12.43
NAT AUSTRALIA BANK 14 3/4 94 A$	150	106	106½		12.06
STATE BK NSW 14 1/4 99 A$	100	110⅛	110⅝		12.20
VOLKSWAGEN INTL 15 94 A$	100	106⅛	106⅝	-⅛	12.43
ABBEY NATL TREAS 13 3/8 95 £	100	105⅝	106⅛	-⅛	11.46
BARCLAYS JERSEY 9 1/2 93 £	250	97⅛	97½		11.21
BRITISH GAS 12 3/4 95 £	300	104⅞	105⅛	-⅛	11.12
DEUTSCHE BK FIN 11 94 £	225	100⅛	100⅝	-⅛	10.90
EIB 10 97 £	306.5	96⅛	96⅝	-⅛	10.89
FORD CREDIT FUNDING 9 5/8 93 £	50	95⅛	96⅛	-⅛	12.16
INTER AMER DEV 11 3/8 95 £	75	101⅞	102⅛	-⅛	10.85
ITALY 10 1/2 14 £	400	93⅛	93⅝		11.29
LAND SECS 9 1/2 07 £	200	80⅞	81⅛	-⅛	12.28
LEEDS PERMANENT 9 1/4 93 £	50	95⅛	96⅛		11.69
NORWAY 10 1/2 94 £	200	98⅞	99⅛		10.95
ROLLS-ROYCE 9 5/8 93 £	150	96	96⅛		11.75
SAINSBURY 10 7/8 93 £	100	99	99⅛		11.47
SKANDINAVISKA ENSK 13 1/8 95 £	100	104⅛	105	-⅛	11.66
WORLD BANK 11 1/4 95 £	100	101⅜	101⅞		10.80
ABBEY NATIONAL 0 96 NZ$	100	52⅞	53⅛		12.45
TELECOM NZ O/S FIN 13 1/8 93 NZ$	75	102⅛	103⅛		11.91
AIDC 7 7/8 93 FFr	600	96⅝	97	-⅛	9.45
CREDIT LYONNAIS 10 95 FFr	3200	101⅛	102⅛		9.45
EURATOM 7 5/8 98 FFr	500	91⅛	91⅝	-⅛	9.34

FLOATING RATE NOTES	Issued	Bid	Offer	C.cpn
ALBERTA PROVINCE 1/32 93	500	100.08	100.18	7.5938
ALLIANCE & LEICS 0.08 94 £	300	99.53	99.62	14.1425
BANCO ROMA 0.03 01	200	91.67	92.84	7.9363
BANCO SANTO SPIRITO 93	200	99.70	99.82	6.5000
BELGIUM 1/16 97 DM	500	99.95	100.09	9.1250
BFCE -0.02 96	350	100.04	100.14	7.7925
BNP 05	300	96.75	97.25	6.1250
BRITANNIA 1/18 96 £	150	99.05	99.22	14.1625
CCCE 06 ECU	200	99.92	100.02	9.4435
CITIZENS FED 0.15 96	100	99.33	99.70	7.0250
COMMERZBK O/S FIN 93	200	99.84	99.94	6.5625
DENMARK -1/8 96	1000	99.55	99.65	6.5938
DRESDNER FINANCE 1/32 98 DM	1000	99.66	99.78	9.2188
ELEC DE FRANCE 1/8 99	400	100.20	100.56	7.0000
FERRO DEL STAT 94	200	100.50	100.70	6.8750
HALIFAX 1/10 94 £	200	99.74	99.85	13.6000
HILL SAMUEL 1/4 PERP	75	81.25	83.75	8.5000
MITSUI FIN ASIA 1/8 96	100	99.68	99.78	7.8000
MORGAN (JP) 1/4 97	250	98.65	99.13	7.0625
NAT WEST FIN 3/16 05	400	92.25	93.25	8.3125
NEW ZEALAND 93	500	99.71	99.81	6.5000
QUEBEC PROV 01	300	96.66	96.94	6.1250
RENFE 98	500	99.89	99.99	7.8750
SOCIETE GENERALE 96	300	99.04	99.14	6.3125
STATE BK VICTORIA 0.05 99	125	98.32	98.57	7.8625
UNITED KINGDOM -1/8 96	4000	100.03	100.06	6.1875

CONVERTIBLE BONDS	Issued	Conv. price	Bid	Offer	Prem.
ARGYLL GROUP 4 1/2 02 £	60	2.95	113	113¾	+5.83
ASDA-MFI 4 3/4 02 £	100	1.64	114½	115⅛	+35.19
BURTON GROUP 4 3/4 01 £	110	3.15	116	117⅛	
EASTMAN KODAK 6 3/8 01	300	50.67	96⅛	97⅛	+13.06
GOLD KALGOORLIE 7 1/2 00	65	1.0554	59⅞	60⅜	+27.74
GOODYEAR TIRE 6 7/8 03	150	80⅛	64½	65⅜	
GRACE (WR) 6 1/4 02	150	47⅞	88⅜	89⅜	+20.41
GRAND MET 6 1/4 02 £	100	6.58	119⅛	120⅛	-1.79
RAWLEY 6 02 PREF	400	1.91	89⅝	91	+75.89
HILLSDOWN 4 1/2 02 £	150	4.16	108⅛	109⅛	+73.00
INTL PAPER 5 3/4 02	200	68⅛	99⅛	100⅛	+7.33
LAND SECS 6 3/4 02 £	84	6.72	87⅞	88⅜	+10.17
MITSUBISHI BK 1 3/4 02	300	2727.1	105½	107⅛	-3.01
OGDEN 6 02	85	39.077	71⅛	72⅛	+44.64
PACIFIC DUNLOP 6 3/4 97	75	3.749	111½	112½	-0.37
TEXAS INSTRUMENTS 2 3/4 02	300	82⅞	83⅛	84⅛	+62.83
THORN EMI 5 3/4 04 £	105	7.45	111⅛	112⅛	+14.64

* No information available - previous day's price
‡ Only one market maker supplied a price

STRAIGHT BONDS: The yield is the yield to redemption of the bid-price; the amount issued is in millions of currency units. Chg. day=Change on day.
FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. Spread=Margin above six-month offered rate (‡three-month §above mean rate) for US dollars. C.cpn=The current coupon.
CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Cnv. price=Nominal amount of bond per share expressed in currency of share at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

INTERNATIONAL CAPITAL MARKETS

Spain issue could spark Ecu primary sector revival

By Tracy Corrigan

INTERNATIONAL BONDS

THE Ecu bond market, which has been subdued for the last month or so, looks set to revive, as the Kingdom of Spain prepares an Ecu750m-Ecu1bn issue of registered bonds. However, dealers say there is an overhang of paper from the deluge of issues earlier in the year.

Banesto will lead manage the issue, which may emerge later this week.

Spain's debut in the Ecu market a year ago, an Ecu500m offering due 1995, has performed strongly and is yielding 9.08 per cent, a relatively expensive level compared with other secondary market issues.

An intensive marketing campaign in Spain will seek to encourage domestic participation, which ran at around 5 per cent for the last issue. On the face of it, Spanish investors have little incentive to buy Ecu bonds yielding 9 per cent or so, when Spanish government bonds denominated in pesetas yield more than 12 per cent and carry no foreign exchange risk. However, the peseta is expected to weaken against the Ecu over the medium- to long-term, so domestic investors' returns may be enhanced by currency gains.

In addition, Banesto will again be offering Ecu bank accounts to retail investors.

Nevertheless, despite its domestic, registered structure, the deal will be mainly placed internationally, and will trade like a Eurobond. The issue, which will not be swapped, is expected to be attractively priced, given its political purpose.

The maturity and size of the issue could be fixed later today, once the extent of institutional interest in the French Treasury's offer to exchange an outstanding six-year Ecu bond issue for longer-dated bonds has been gauged.

In the Australian dollar market, the State Electricity Commission of Victoria launched an A$100m 10-year deal. The borrower's outstanding debt is currently under review by Moody's for possible downgrade from Double-A1. However, the pricing took account of any uncertainty, dealers said. They added that investors know Australian states (the borrower is guaranteed by the State of Victoria) are declining credits. In the equity-linked sector, Unitika, a Japanese textile manufacturer, launched a $110m four-year deal, quoted at a premium of three points to its par issue price.

NEW INTERNATIONAL BOND ISSUES

Borrower	Amount m.	Coupon %	Price	Maturity	Fees	Book runner
US DOLLARS						
Unitika Co.(a)♦	110	4	100	1995	2¼/1½	Nomura Int.
P.T. Inti Indorayon Utama(b)§†	60	7	100	2006	2½/1½	CSFB
AUSTRALIAN DOLLARS						
State Elec.Comm.Victoria(a)†	100	12¼	101⅛	2001	2⅛/1⅜	Hambros Bank
LIRE						
Cr.Suisse Fin.Gibraltar(a)†	150bn	12.20	101⅞	1996	1⅞/1¼	Banco di Napoli

★Private placement. §Convertible. ♦With equity warrants. ‡Floating rate note. †Final terms. a) Non-callable. b) Coupon was indicated at (7%-7¼%). Conversion premium fixed at 6.78%. Callable from May 1994 at 102% declining 1% per annum until 100% in 1996.

Japan to tighten curb on first-day OTC trade

THE JAPAN Securities Dealers' Association is to lower from 5,000 to 2,000 the number of shares in a newly-listed company that an investor can buy on the issue's first trading day on the over-the-counter (OTC) market, AP-DJ reports from Tokyo.

An association official said the new rule will be applied from today. The move is intended to limit the sharp surge in share prices for newly-listed issues that has resulted from increasing participation by cash-rich institutional investors and corporations, he said.

The association controls the maximum number of shares to be traded on the first OTC trading day according to market conditions. It increased the number of shares that a single investor could buy to 5,000 in October 1990 in response to stock market weakness following the Gulf crisis.

● Meiji Mutual Life Insurance has reached an agreement with Canadian Imperial Bank of Commerce (CIBC) of Toronto on establishing business co-operation.

Meiji Mutual and CIBC, Canada's second largest commercial bank, will exchange information and know-how on investment and loan operations. The two companies will also exchange personnel as trainees.

Securities chiefs split as deadline looms

FT CONFERENCE

EUROPEAN SECURITIES MARKETS IN THE 1990s

Ahead of next month's Athens meeting which aims to approve a pan-European stock market trading system, the views of industry leaders are polarised, reports **Richard Waters.**

SENIOR officials of the largest stock markets in the European Community still have markedly different ambitions for a proposed system to support cross-border share trading, just one month before they are due to reach agreement on the system's final form.

Speaking in London yesterday at a conference on the development of the European securities industries, officials from Germany, France and the UK seemed as far apart as ever on the future for securities trading in Europe. Yet at a meeting in Athens in a month's time, they and other EC exchanges hope to agree the development of Euroquote, a network which could form the basis for cross-border share trading.

Mr Rüdiger von Rosen, executive vice-chairman of the Federation of German Stock Exchanges, said that there is no demand in Germany for Euroquote to act as a pure information system – the planned first phase of the development. Instead, he said, "the obvious need remains for a European settlement system".

Mr Jean-François Théodore, chairman and chief executive of the Paris Bourse, did not specifically address the question of Euroquote in his speech, but later said that the system was not a necessary part of cross-border share trading. Commercial information suppliers could disseminate information just as effectively, he said.

Mr Peter Rawlins, chief executive of London's International Stock Exchange, said that to be useful, Euroquote should carry regulated company news – something that only two of the 12 EC exchanges could currently provide about companies they listed. He added: "We are sceptical about the development of Euroquote into any (as yet wholly undefined) kind of trading or settlement system . . . We must first decide what it is that Europe's markets need."

Mr Patrick Gifford, a director of Fleming Investment Management, challenged many of the assumptions made by the exchanges when he said that, for an investor, the current fragmented European markets offered greater opportunities than would exist in a single, efficient, transparent market.

Instead, he called for cheaper settlement costs and changes that would make the job of fund managers easier. These include a common settlement period in all markets, to make international switching easier, and more information from exchanges about corporate actions like the timing of dividend payments.

Differences also arose over the regulation of cross-border share trading. The EC hopes by June to agree an Investment Services Directive to regulate securities business, but this has so far foundered on strong differences of principle.

Mr Théodore said that cross-border share trading would develop through co-operation between existing national markets, each of which would remain the main centre of liquidity in its own domestic shares. What was needed was high standards of transparency and listing requirements on each market.

He defended the view that this should be extended to all equity markets, including wholesale markets developed for professional investors, such as SEAQ International in London. "Investors need some sort of price transparency, whatever the market they are dealing on," he said.

Mr Rawlins, though, argued against imposing a common level of price transparency, adding that such ideas "could drive business away from regulated markets or, indeed, drive it away from Europe altogether."

Mr Geoffrey Fitchew, director general of the EC directorate for financial institutions and company law, laid out the terms of the EC's planned compromise. He said that investors should be able to give a blanket authorisation to intermediaries to deal off-exchange on their behalf, and that it should be left to member states to decide whether and when the details of transactions are published, provided they are all reported to a market authority.

Mr Jeffrey Knight, conference chairman and a special adviser to the Federation of Stock Exchanges in the EC, said Europe's various securities markets would inevitably grow closer.

"The question is not whether markets will become integrated, but how," he said.

Brazil warms to overseas mediums

By Victoria Griffith in Sao Paulo

FOREIGN-issued medium-term notes have become one of the hottest corporate finance tools in Brazil this year, as tight credit and high inflation at home force companies to look abroad for funds.

Brazilian companies have so far issued $620m of medium-term notes overseas in 1991.

The product is officially known as "commercial paper". But because it must be placed at maturities of at least two years, bears more resemblance to medium-term notes.

Brazilian banks have been quick to take advantage of the change in rules. Banco Frances e Brasileiro (BFB), an associate of Crédit Lyonnais, has issued $100m during the past few months, and is currently negotiating another $100m issue. Credibanco has made a $100m placement and Banco Real $20m.

"The product has given us an important new option in obtaining medium-term financing," said Mr Ruy Raya, head of commercial-paper issues at BFB. "Inflation is still so high here that it is extremely difficult to obtain funds with maturation more than a few months out."

One of the main attractions of medium-term notes is their tax-exempt status. This allows multi-national companies to use the product to replace inter-company loans, which are fully taxed.

The success of this product contrasts sharply with domestic commercial paper issues which have failed to catch investors' imaginations. Since the product came on the market in November last year, not a single issue has been made.

According to a spokesman for the Comissao de Valores Mobiliarios (CVM), Brazil's stock market watchdog, this is because a flat tax of 0.64 per cent of the total value of the issue has proved prohibitively expensive.

The issuing group must be registered with the CVM, itself a costly process. Domestically issued commercial paper also carries a maximum maturity of six months, a term unappealing to companies in dire need of longer-term funds.

Merrill reduces junk portfolio

MERRILL Lynch has sharply reduced its junk bond portfolio, according to Mr William Schreyer, chairman. He was speaking at the firm's annual meeting. Merrill is "doing very well in junk bonds" and its inventory is at a very low level, he said, AP-DJ reports.

One of Merrill's leading priorities has been to reduce its large portfolio of junk bonds while at the same time increasing its junk-related business in areas such as corporate restructuring.

Mr Schreyer said Merrill, the largest brokerage in the US, did not anticipate another round of significant layoffs in 1991.

German bank to raise DM500m convertible

By Katharine Campbell in Frankfurt

BAYERISCHE Hypotheken und Wechsel-Bank, the smaller of Bavaria's two leading banks, is increasing its capital by an issue of DM500m worth of convertible participating certificates.

The certificates give investors a share of the profits, but do not carry voting rights. Under German banking law, they count as risk but not core capital, and under future EC guidelines will be classed as tier two supplementary capital.

The bank is boosting its capital reserves after a year of rapid credit expansion in all areas, including in east Germany.

The participating certificates are being offered, at a price yet to be fixed, to holders of shares and to holders of warrants in the ratio of 39 shares or 39 warrants for one convertible participating certificate with a face value of DM1,000.

The certificates mature at the end of 2001 and pay a coupon of 9.25 per cent. Investors have the option to convert one certificate into 3 shares in the period June to December from 1992 to 1999.

● Spain's Banco Hispano Americano and Commerzbank of Germany have agreed to open a joint offshore banking operation in Gibraltar. The bank, to be called Hispano Commerzbank, will begin operations with Pta1bn in start-up capital.

Norske Skog poised to launch convertible bond

By Karen Fossli in Oslo

NORWAY'S Norske Skog, one of Scandinavia's biggest pulp and paper producers, plans to issue a convertible bond in the range of NKr550m to NKr700m, with maturity on December 31, 2000.

The proposal will be made at the company's annual general meeting on May 14. The bond will be convertible into B shares.

The issue is the last phase of a NKr6bn financing programme which was initiated in 1990 when a NKr500m convertible bond was launched.

Norske Skog said that the new issue will be aimed at international capital markets and placed with a selected number of investors.

To retain flexibility in fixing the terms, a framework for the new issue has been decided. The final proposal will cover the conversion premium, coupon, subscription period and payment date.

The placement is scheduled for the period between May 6 and May 15, if the convertible bond is approved at the annual general meeting.

● Topdanmark, the Danish banking and insurance group, said its banking unit Aktivbanken will take over Sydfyns Discontobank as part of its strategy of building a nationwide financial services network. Sydfyns' end-1990 balance sheet total was DKr1.1bn.

LONDON MARKET STATISTICS

FT-ACTUARIES SHARE INDICES

EQUITY GROUPS & SUB-SECTIONS. Figures in parentheses show number of stocks per section	Mon Apr 22 1991 Index No.	Day's Change %	Est. Earnings Yield% (Max.)	Gross Div. Yield% (Act at (25%))	Est. P/E Ratio (Net)	xd adj. 1991 to date	Fri Apr 19 Index No.	Thu Apr 18 Index No.	Wed Apr 17 Index No.	Year ago (approx) Index No.
1 CAPITAL GOODS (187)	854.08	-1.0	11.38	5.66	10.79	11.55	862.53	868.17	871.85	831.38
2 Building Materials (24)	1091.10	-1.3	11.56	5.68	10.68	8.18	1105.97	1117.17	1128.79	1004.17
3 Contracting, Construction (31)	1375.52	-0.6	10.37	5.75	12.46	21.06	1384.40	1383.75	1387.15	1339.64
4 Electricals (10)	2365.83	-1.7	11.12	5.66	11.46	40.46	2406.41	2425.52	2445.18	2361.89
5 Electronics (26)	1799.12	-1.3	8.69	4.95	15.34	3.31	1822.94	1845.24	1847.32	1743.79
6 Engineering-Aerospace (8)	451.52	-1.0	15.48	5.55	7.77	8.86	456.28	453.54	455.81	436.83
7 Engineering-General (47)	458.57	-0.6	12.37	5.73	9.73	7.96	461.57	464.72	462.68	457.69
8 Metals and Metal Forming (8)	483.48	-0.9	18.87	7.14	6.54	0.59	487.94	491.67	493.13	469.91
9 Motors (13)	349.09	-1.1	12.35	6.84	9.58	9.45	352.93	354.02	352.98	341.69
10 Other Industrial Materials (20)	1514.50	-0.7	9.47	5.36	12.47	28.99	1524.45	1535.03	1544.74	1537.69
21 CONSUMER GROUP (185)	1452.78	-1.1	8.35	3.68	14.74	11.93	1468.74	1476.46	1479.94	1178.11
22 Brewers and Distillers (22)	1775.35	-1.1	9.06	3.65	13.61	14.86	1795.25	1802.45	1808.58	1390.35
25 Food Manufacturing (20)	1195.10	-1.0	9.43	4.08	13.08	15.95	1206.73	1208.56	1208.79	1030.29
26 Food Retailing (16)	2712.50	-2.0	8.06	2.88	16.21	14.42	2767.24	2795.06	2804.91	2213.04
27 Health and Household (21)	3231.92	-1.1	5.90	2.62	19.28	20.72	3266.34	3282.28	3293.05	2449.61
29 Hotels and Leisure (21)	1346.15	-0.7	10.18	5.14	11.59	16.64	1355.87	1356.85	1362.15	1298.88
30 Media (24)	1481.01	-1.6	9.44	4.64	13.28	17.84	1504.40	1518.71	1521.09	0.00
31 Packaging, Paper & Printing (16)	670.02	-1.3	8.25	4.92	15.15	11.00	679.01	679.41	677.01	555.70
34 Stores (34)	917.76	-0.4	9.10	3.94	14.24	2.37	921.31	928.88	930.30	712.71
35 Textiles (11)	529.12	-1.1	10.06	6.09	12.53	3.08	535.10	536.90	537.78	464.26
40 OTHER GROUPS (108)	1202.78	-1.3	10.00	5.02	12.23	9.64	1218.99	1228.01	1227.94	1093.89
41 Business Services (13)	1191.85	-1.4	11.29	5.01	10.85	8.36	1208.48	1214.00	1220.12	0.00
42 Chemicals (21)	1272.17	-1.5	9.18	5.63	12.49	23.86	1291.02	1296.08	1278.19	1164.80
43 Conglomerates (10)	1532.30	-1.2	10.94	6.71	10.92	12.84	1550.71	1552.73	1550.20	1535.83
44 Transport (14)	2163.05	-0.9	11.39	4.78	10.77	25.52	2181.80	2200.82	2212.47	2154.31
45 Electricity (14)	1169.72	-1.2	11.85	5.70	10.57	0.00	1183.55	1190.74	1186.40	0.00
46 Telephone Networks(4)	1426.94	-1.6	9.31	3.50	13.97	0.00	1449.83	1462.44	1466.31	1057.48
47 Water(10)	2433.73	-1.2	13.93	5.76	8.02	39.69	2463.92	2528.76	2532.58	1873.70
48 Miscellaneous (22)	1872.84	-1.3	6.44	4.98	19.73	21.39	1897.79	1909.10	1921.01	1760.38
49 INDUSTRIAL GROUP (480)	1229.97	-1.1	9.49	4.51	12.93	11.34	1244.19	1251.91	1254.37	1078.80
51 Oil & Gas (20)	2449.95	-0.3	10.28	5.44	12.68	40.03	2457.67	2466.93	2480.35	2211.49
59 500 SHARE INDEX (500)	1332.78	-1.0	9.60	4.63	12.90	13.58	1346.70	1354.62	1357.90	1173.16
61 FINANCIAL GROUP (97)	819.06	-1.1	-	5.76	-	17.25	828.49	838.11	837.60	760.28
62 Banks (9)	918.18	-0.8	8.07	5.98	17.89	21.93	925.71	940.19	942.56	793.76
65 Insurance (Life) (7)	1490.40	-2.6	-	5.55	-	41.64	1529.76	1560.92	1572.32	1268.28
66 Insurance (Composite) (6)	676.83	-1.7	-	6.48	-	20.23	688.62	692.36	682.70	635.44
67 Insurance (Brokers) (8)	1173.47	-1.1	6.80	5.72	19.13	20.10	1186.31	1188.11	1202.38	1055.67
68 Merchant Banks (7)	427.25	-0.2	-	4.74	-	4.47	427.90	429.26	429.60	437.29
69 Property (40)	998.60	-0.7	6.43	4.71	21.37	4.21	1005.82	1024.01	1010.32	1095.43
70 Other Financial (20)	290.91	-0.2	9.47	6.21	13.01	4.41	291.38	292.15	290.70	306.25
71 Investment Trusts (69)	1202.18	-0.8	-	3.42	-	10.94	1212.33	1218.66	1218.58	1153.48
99 ALL-SHARE INDEX (666)	1207.44	-1.0	-	4.75	-	14.09	1220.16	1228.27	1230.65	1074.10

	Index No.	Day's Change	Day's High (a)	Day's Low (b)	Apr 19	Apr 18	Apr 17	Apr 16	Apr 15	Year ago
FT-SE 100 SHARE INDEX♦	2490.8	-29.3	2509.3	2490.8	2520.1	2538.4	2545.0	2519.5	2542.8	2159.2

FIXED INTEREST

PRICE INDICES	Mon Apr 22	Day's change %	Fri Apr 19	Accrued Interest	xd adj. 1991 to date
British Government					
1 Up to 5 years (28)	120.63	-0.04	120.68	1.70	3.79
2 5-15 years (30)	130.30	-0.03	130.34	1.24	5.15
3 Over 15 years (8)	138.60	-0.05	138.66	1.94	4.05
4 Irredeemables (6)	155.02	+0.02	155.00	4.25	1.50
5 All stocks (72)	129.61	-0.04	129.66	1.51	4.62
Index-Linked					
6 Up to 5 years (1)	158.07	....	158.06	-0.21	2.72
7 Over 5 years (10)	146.78	-0.04	146.83	0.57	1.52
8 All stocks (11)	147.65	-0.03	147.70	0.54	1.56
9 Debs & Loans (54)	110.20	+0.09	110.10	2.64	2.65

AVERAGE GROSS REDEMPTION YIELDS		Mon Apr 22	Fri Apr 19	Year ago (approx.)
British Government				
1 Low	5 years	9.21	9.18	11.98
2 Coupons	15 years	9.66	9.65	11.65
3 (0%-7¾%)	20 years	9.79	9.78	11.59
4 Medium	5 years	10.31	10.29	13.21
5 Coupons	15 years	10.11	10.10	12.13
6 (8%-10¾%)	20 years	10.05	10.05	11.87
7 High	5 years	10.45	10.42	13.33
8 Coupons	15 years	10.28	10.28	12.42
9 (11%-)	20 years	10.21	10.22	12.17
10 Irredeemables	†	10.03	10.03	11.56
Index-Linked				
11 Inflation rate 5%	Up to 5yrs.	3.77	3.76	4.82
12 Inflation rate 5%	Over 5 yrs.	4.11	4.11	4.23
13 Inflation rate 10%	Up to 5 yrs.	2.88	2.87	3.78
14 Inflation rate 10%	Over 5 yrs.	3.92	3.92	4.04
15 Debs &	5 years	11.86	11.86	16.23
16 Loans	15 years	11.64	11.64	14.02
17	25 years	11.43	11.43	13.39

♦Opening index 2507.5; 9 am 2503.9; 10 am 2509.0; 11 am 2501.0; Noon 2497.2; 1 pm 2500.3; 2 pm 2501.3; 2.30 pm 2502.6; 3 pm 2502.7; 4.10 pm 2493.9; (a) 9.58am (b) 4.31pm † Flat yield. Highs and lows record, base dates, values and constituent changes are published in Saturday issues. A list of constituents is available from the Publishers, The Financial Times, Number One, Southwark Bridge, London SE1 9HL. The FT-ACTUARIES SHARE INDICES SERVICE includes details of the information used in the construction of these indices. These are available by subscription from FINSTAT, 071-925 2323.

RISES AND FALLS YESTERDAY

	Rises	Falls	Same
British Funds	0	56	28
Corporations, Dominion and Foreign Bonds	1	7	12
Industrials	186	423	932
Financial and Properties	86	232	424
Oils	21	14	57
Plantations	1	0	9
Mines	62	14	86
Others	82	49	25
Totals	439	795	1,573

LONDON RECENT ISSUES

EQUITIES

Issue Price	Amount Paid up	Latest Renunc. Date	1991 High	1991 Low	Stock	Closing Price	+or-	Net Div	Times Cov'd	Gross Yield	P/E Ratio
[illegible]											

FIXED INTEREST STOCKS

Issue Price £	Amount Paid up	Latest Renunc. Date	1991 High	1991 Low	Stock	Closing Price £	+or-
[illegible]							

RIGHTS OFFERS

Issue Price p	Amount Paid up	Latest Renunc. Date	1991 High	1991 Low	Stock	Closing Price p	+or-
[illegible]							

a Annualised dividend. b Figures based on prospectus estimates. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. g Assumed dividend and yield. u Forecast or estimated annualised dividend rate, cover based on previous year's earnings. F Dividend and yield based on prospectus or other official estimates for 1990-91. H Dividend and yield based on prospectus or other official estimates for 1991. L Estimated annualised dividend, cover and p/e based on latest annual earnings. M Dividend and yield based on prospectus or other official estimates for 1991-92. N Dividend and yield based on prospectus or other official estimates for 1992. Q Gross. R Forecast annualised dividend, cover and p/e ratio based on prospectus or other official estimates. W Pro Forma figures. ‡ Offered to holders of ordinary shares as a "rights". ? Introduction. § Placing price. ¶ Reintroduction. ◆ Unlisted securities market. ♦ Issued in connection with reorganisation, merger or takeover. pm Price at a premium.

TRADITIONAL OPTIONS

- First Dealings — April 22
- Last Dealings — May 3
- Last Declarations — July 25
- For settlement — August 5

For rate indications see end of London Share Service

Calls in Doctus, Goodwin, Ivernia West, Oliver Res., Premier Cons., Rosehaugh, Saatchi & Saatchi and Shell Transport. Put and call in Rosehaugh.

LONDON TRADED OPTIONS

[illegible]

Travis Perkins declines to £20.36m

By Andrew Taylor, Construction Correspondent

THE RECESSION in the UK housebuilding industry has caused pre-tax profits to fall for the second year in succession at Travis Perkins, the builders' merchant and timber group.

Last year profits fell by almost 38 per cent, from £32.8m to £20.36m. In the previous 12 months pre-tax profits fell by 16 per cent.

Mr Tony Travis, chairman said: "The current year will be another difficult one for the construction industry. The first three months of this year, particularly January and February, were very poor. First-half profits, therefore, will be down sharply on those achieved in the corresponding period last year.

"The downturn is such that it will be very difficult to catch it up during the rest of the year – even allowing for a recovery in the second half of the year."

Pre-tax profits last year were reduced by about £4m charged against bad debts: "Bad debts, as a proportion of sales, were about three times higher than we would expect in a normal market," said Mr Travis.

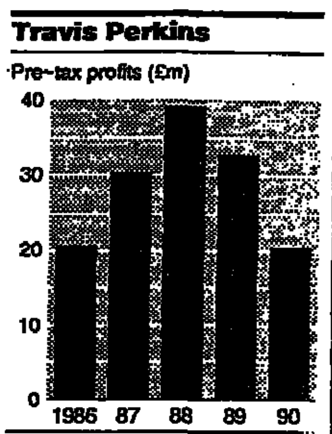
Redundancy costs reduced profits by a further £1.5m. There was an exceptional charge of a similar amount to cover the final costs of integrating the Travis Arnold and Sandall Perkins businesses, merged in 1988.

There was a net reduction of about 400 staff last year, achieved through a combination of natural wastage and redundancy. The group, on the other hand, raised about £3m from property sales.

Turnover fell by 3.6 per cent from £360.9m to £347.7m. Volume sales were down by about a tenth. Profits in the second six months fell by more than half to £6.9m. This compares with a 21 per cent fall to £13.5m in the first half.

"The last quarter of 1990 was particularly gruelling, with bad debts and redundancy costs adding to overheads as building activity continued to decline," said Mr Travis.

The group declared a final dividend of 5.5p making a total payment of 8p, the same as in 1989. Dividends were 1.7 times covered by earnings per share of 13.8p (22p).



● **COMMENT**

About three quarters of Travis Perkins' sales go to the housing market for repair, maintenance and improvement, as well as new house building. It is therefore an ideal recovery stock as mortgage interest rates come down and confidence in the housing sector starts to pick up. The company has no debt and is well managed – gross margins actually improved slightly last year in one of the most difficult periods for construction sales. The problem is in gauging the timing and likely extent of the recovery. Housebuilders have reported a rise in sales since interest rates began to fall in February. Much of this, however, will be stock and it will take time for a recovery to work through to building material sales. The company is right to be cautious. Profits this year could slip further to about £18m. This would put the group on a prospective p/e of 19 which looks expensive. Hold for the long term and buy on weakness.

Boot bucks sector trend with 19% rise to £6.4m

By Andrew Taylor

TAXABLE PROFITS of Henry Boot & Sons, the Sheffield-based construction and property group, rose by 19 per cent to £6.36m in 1990 to provide a rare profits advance in what was a very difficult year for most construction groups.

Turnover declined to £131.03m (£136.13m), but earnings rose 15 per cent to 76.1p (66.1p) per share. The company proposed a final dividend of 18p to make a total of 25p. This compares with 21p in 1989.

Mr Jamie Boot, managing director, said the group had a much lower exposure to residential and commercial property markets than many construction companies which have suffered as a result of falling demand in these markets. Boot has no borrowings.

At the end of 1989 Boot had cash of about £9m. This position is thought to have remained largely unchanged at the end of last year.

The company, of which the Boot family owns just over 50 per cent, said the construction market had of late become more difficult. It warned that it was unlikely "that the past level of growth in earnings will be maintained in the foreseeable future".

BOARD MEETINGS

The following companies have notified dates of board meetings to the Stock Exchange. Such meetings are usually held for the purpose of considering dividends. Official indications are not available as to whether the dividends are interims or finals and the subdivisions shown below are based mainly on last year's timetables.

TODAY

Interims- Allied London Props, Cosalt, Keystone Inv, McCarthy & Stone, McKechnie, St Ives.

Finals- Bridgend, British Fittings, Cannon Street Invs, Edinburgh Inv Trust, FR, Farnell Elecs, London American Ventures Trust, OS, Tarmac, Tyne Tees Television, Ward Group.

FUTURE DATES

Interims-	
Eurocopy	May 30
Scottish American Inv	Apr. 29
Witan Inv	July 1
Finals-	
Bletchley Motor	Apr. 26
Elam	Apr. 25
NORWEB	June 27
Smurfit (Jefferson)	May 7
Wensum	Apr. 26

Boddington makes strong attack on Devenish board

By Roland Rudd

BODDINGTON yesterday launched a blistering attack on Devenish, the West Country brewer, accusing it of wasting millions of pounds of shareholders' money.

In a document sent out to Devenish shareholders, containing details of its £127.7m hostile takeover bid, Boddington, the pubs, hotels and health-care group, accuses the Devenish board of wasting more than £80m on advertising new brands marketed under the Newquay Steam label.

Boddington says the investment by Devenish "was ill-conceived from the outset" and alleges that its failure has had an adverse effect on the company's profitability.

It accuses Devenish of U-turns in its strategy in first buying wholesalers only to sell them later, and queries the value attributed in the company's accounts to the brewery.

For good measure, it says plans by Devenish to expand the number of its pubs "has failed to materialise".

Mr Hubert Reid, managing director of Boddington, said:

"Devenish's decision to invest in brewing and brands was a grave mistake.

"It was also badly executed. Its board is guilty of poor judgement and then poorly carrying out those decisions."

A spokesman for Devenish denied the charges and said there was nothing substantially new in the document which still failed to address the fact that Boddington's hostile bid "substantially undervalues" the company.

Ricardo Intl expands

Ricardo International is buying Advance Technology Design, a gas turbine consultancy, for £550,000 payable in shares or loan stock.

The first tranche will be 300,757 shares valued at 96p.

Reduced offer for Coats offshoot

By Robert Gibbens in Montreal

AN INTERNATIONAL investor group has reduced its bid for Consoltex, the Montreal-based fabric maker, from C$38 to C$33 per share and Coats Viyella, which has owned 81 per cent of the Canadian company for the past decade, has said this was fair value and it would accept.

In February, Consoltex reported 1990 profits of C$9m (£4.54m), or C$3.14 per share, on sales of C$169m, up slightly from 1989. At that time the investor group was willing to pay C$38 per share. Coats stood to collect to well over C$110m.

However, in the first quarter of this year, Consoltex incurred losses of C$596,000, or 20 cents per share (profits of C$2.7m, or 95 cents per share). Sales dipped 25 per cent to C$34m. Federal and Quebec sales taxes were applied to apparel for the first time on January 1, causing a deep decline in clothing sales and thus fabric sales.

Consoltex expects some improvement in the rest of the year as interest rates come down and the economy picks up steam.

The old offer was withdrawn and "a revised investor group" made the new offer, subject to 90 per cent acceptance, said Coats and Consoltex. Details will be mailed early in May.

Consoltex would not reveal the principals behind the investor group.

Mrs Fields warns of loss as Gulf war hits sales

By Clare Pearson

Shares in Mrs Fields cookie company yesterday slumped 4½p to 11p after warnings that it had fallen back into the red in the last financial year.

In a brief statement, the USM-quoted company said its preliminary results for the year to the end of December 1990 would be published late next month and the company would show a net loss.

It is expected to blame television coverage of the Gulf war for keeping people at home and depressing sales of cookies on the high street.

The company had previously been scheduled to announce its results today, and the announcement dashed hopes that it would build on its modest return to profit in 1989.

Last September, Mrs Fields reported lower net losses of $2.63m ($3.53m) for the first half, fuelling hopes that the full-year result could reach about $3m (£1.75m) against 1989's $1.53m.

After it floated on the USM in 1986, Mrs Fields acquired a notoriety for disappointing shareholders, most notably in 1988 when it clocked up a net loss of $18.9m.

Founders Mrs Debbi Fields and her husband stepped back from day-to-day management last year.

Arncliffe shares suspended at 83p

Arncliffe Holdings, the Leeds-based housebuilder, has requested a temporary suspension of its shares, pending the conclusion of negotiations on a capital injection and a strengthening of the board, writes Michiyo Nakamoto.

"We have been in negotiations for some time and they are now at an advanced stage," directors said. Once the negotiations are completed, the group plans to announce both results for the year to October 31 and details of the proposed capital investment in the group. The shares were suspended at 83p.

In the half-year to April 30, Arncliffe suffered an 83 per cent plunge in profits to £148,000 (£868,000). Profits were hurt by a sharply higher interest charge of £1.09m (£593,000). The group said at the time that it was working to reduce borrowings as quickly as possible.

Turnover dropped 18 per cent to £7.52m (£9.18m) and the interim dividend was passed (2.25p). Earnings per share were 1.94p (11.28p).

Board considering a number of options for future

Institutions attempt to install new management at Budgens

By John Thornhill

A GROUP of institutional shareholders is attempting to remove Mr John Fletcher as chairman of Budgens and install a new management team at the troubled grocery chain.

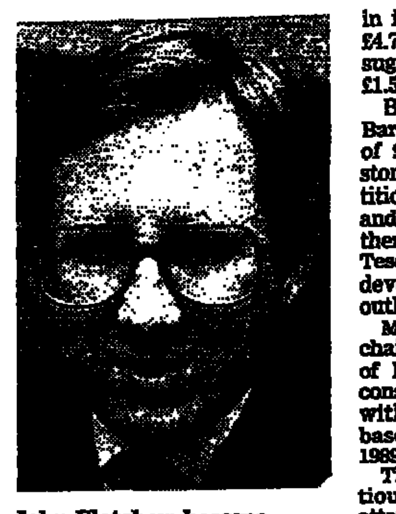
IEP Securities, Electra Investment Trust, and Gartmore Investment Trust, which together hold 27 per cent of the shares, have put a proposal to the board "concerning the future direction of the company".

This is understood to involve the appointment of three new directors including Mr John von Spreckelsen, and two associates, Mr Christian Williams and Mr Graham Rigby.

Mr von Spreckelsen is credited with having rejuvenated KAFU-Wasmund Handelsgesellschaft, a supermarket chain which is based in Bremen, Germany.

The group's proposal is said to be "under active consideration" by the Budgens' board although the company stated that it was also reviewing a number of other options for developing the business.

In recent years, Budgens has recorded poor results having suffered from high borrowings and the disruption caused by setting up a new distribution centre. Yesterday one analyst described the performance of the company as "utterly disastrous".



John Fletcher: became chairman and chief executive in 1985

Earlier this year, the company announced a severe drop in interim pre-tax profits from £4.71m to £505,000 and analysts suggested it might only make £1.5m in the full year.

Budgens, formerly known as Barker & Dobson, runs a chain of 95 neighbourhood grocery stores. It has faced stiff competition from Marks and Spencer and is seen as being under further threat as J Sainsbury and Tesco again express interest in developing their high street outlets.

Mr Fletcher, who became chairman and chief executive of Budgens in 1985, failed to consummate a planned merger with Wm Low, the Scottish-based supermarket chain, in 1989.

This followed a highly ambitious but ultimately abortive attempt to buy Dee Corporation for £2bn.

Budgens has recently strengthened its board through the appointment of Mr Derek Pretty as finance director in December 1989 and Mr Keith Clarke as managing director in April 1990.

Budgens' shares, which have fallen sharply during the past two years, closed 2p higher yesterday at 47p.

Empire 'oui' to 125p cash bid

By Maggie Urry

EMPIRE STORES Group, the mail order retailer, has recommended its shareholders to accept the 125p per share cash offer from Redoute Catalogue, part of La Redoute, the French catalogue retail group.

Mr Martin Mays-Smith, chairman of Empire, recommended the offer although the board believed it did "not fully reflect the value of Empire".

Empire claims a 7 per cent share of the UK mail order market. Its shares were unchanged yesterday at 127p.

The recommendation was not supported by Gecos, the Italian retail group which holds 24.2 per cent of Empire, has been a shareholder since 1984 and has two representatives on the board. It is taking independent advice and will clarify it's position by May 1.

It could remain a minority holder even if Redoute's offer succeeds, and if sufficient other holders did not accept, the listing might be kept.

Redoute said last night it was pleased with the recommendation, but concerned about a "very gloomy trading statement" made by Empire as part of its recommendation, and the lack of a profit forecast for the financial year ending this weekend.

The first closing date for Redoute's offer is tomorrow but Redoute has already promised to extend this to May 8.

Redoute said from the start that its offer, launched in mid-March, would not be increased. This followed its purchase of a 12 per cent stake in Empire from Great Universal Stores, the retail, property and finance company, and a promise to GUS that the subsequent offer would be final.

Redoute already held almost 26 per cent of Empire when it bought the GUS stake, giving it 37.9 per cent.

Mr Mays-Smith said Empire was recommending the offer, which values the group at £49m, because trading had worsened since the group announced an interim loss of £951,000 in January.

Sales had "held up less well than we had expected" he said, and "sales in recent weeks have been particularly disappointing". The group had also suffered a rise in bad debts.

He said "as a result the group's results in the current year will fall short of those for which we had hoped at the time of my interim statement".

Another reason for the recommendation was that the UK mail order industry was being shaken up following the sale of Grattan to Otto Versand, the German retailer, and the possible sale by Littlewoods of its mail order side. This was likely to make the market more competitive. Also the performance of Empire's shares, if it remained independent, was likely to be affected by Redoute's holding.

The recommendation to shareholders also said they should accept "unless a higher offer is announced". However, analysts said the chances of a rival bid were slim given Redoute's stake. If a rival bidder had been interested it would probably have shown its hand by now. Mr Mays-Smith said the group was not in discussions with any other bidder.

Cash call at Synapse as losses mount

The anticipated recovery at Synapse Computer Services is taking longer to achieve, said Mr Michael Goodman, chairman, as the company revealed losses up from £294,000 to £974,000 pre-tax in the six months to January 31.

At the same time the USM-quoted company launched a rights issue of 2.02m new ordinary shares at 72p each on a 4-for-7 basis, to raise £1.8m.

DIVIDENDS ANNOUNCED

		Current payment	Date of payment	Corres-ponding dividend	Total for year	Total last year
Boot (Henry)	fin	18	May 24	15	25	21
Burnfield	fin	3.85	May 28	3.85	5.5♠	5.5
Clydesdale Inv	int	1	June 10	1	-	3.45
How Gp	fin	2.25	July 1	2.25	3.6	3.6
Kingston Oil/Gas	fin	1	July 1	0.6875	1.56	1.86☆
Polymark Intl	fin	1	May 29	nil	1	nil
Ramco Oil	fin	2	-	nil	2	nil
Ratners	fin	7.6	July 29	7.5	10‡	9.5
Travis Perkins	fin	5.5	July 1	5.5	8	8

Dividends shown pence per share net except where otherwise stated. *Equivalent after allowing for scrip issue. †On capital increased by rights and/or acquisition issues. ‡Capital increased on conversion of preference shares. §USM stock. ☆For 18 months. ♠For 11 months.

UK COMPANY NEWS

Cronite puts two problem offshoots into receivership

By Clare Pearson

CRONITE GROUP, the Birmingham-based industrial holding company, said yesterday that it was putting into receivership two of its subsidiaries where irregularities, including misappropriation, had been discovered.

The shares, suspended at 12p on April 5, rose to 23p when were restored to listing after the announcement.

The bigger of the two subsidiaries is Cronite Alloys, which recycles stainless steel. The other is Abtex, which manufactures hand portable fire extinguishers.

The company said it also intended to close or dispose of two other businesses, Hy-Tech, a machining company, and North American Cronite, a sales organisation.

Accounts for the five months to end-February, also published yesterday, showed total losses for the four companies, including closure costs, of £3.05m. At the pre-tax line, the company incurred a £2.18m loss. That compared with a £1.22m profit for the year to end-September.

Cronite said it had discovered that Alloys had suffered a shortfall in expected income amounting to about £400,000 while management accounts had overstated the value of certain stock by £500,000. At Abtex, continuing trading difficulties had been exacerbated by misappropriation of stock.

Concluding that continuation of losses at these two subsidiaries would have an unsustainable effect on cash requirements, Cronite had requested Barclays, its bank, to appoint receivers.

Mr James Lindsay-German, chief executive, said he could not comment on whether the irregularities would give rise to any legal action. The decision follows investigations by Arthur Anderson, the accountants.

Cronite said Barclays had confirmed the availability of facilities for the remainder of the year, subject to an £8.2m maximum, and with this arranged it hoped it would be able to develop its profitable businesses.

But there will be no interim dividend owing to a shortfall in distributable reserves.

At the trading level, five-monthly losses at discontinued businesses were £1.87m (against £70,000 for the 12 month period) while profits at the rest of the group were £262,000 (£2.4m). Net assets per share were 31.1p (48.2p).

The deterioration follows a sharp fall in profitability during the previous year when pre-tax profits of £1.2m were about half their 1989 level.

Proudfoot sale

Alexander Proudfoot has sold its BAS subsidiary group of debt collection and in-house legal recovery services for £5.5m to Matahari 388, which is backed by a syndicate led by Foreign & Colonial Ventures.

Greencore offer nearly three times subscribed

By Clare Pearson

THE OFFER for sale of Greencore, the formerly state-owned Irish Sugar group which is being floated in London and Dublin, has been about 2.8 times subscribed.

Yesterday the company said applications had been received for 111.8m shares, against the 39.46m available. The offer price was I£2.30.

Stripping out shares for which firm undertakings had been received and which have been fully allotted, and those laid aside for employees and beet growers, 15.52m shares were available generally. These attracted 87.86m applications and they are being scaled down as follows:

Applications for 100 to 299 shares will result in the allocation of 100 shares; for 300-599, 200; for 600-999, 300; for 1,000 to 2,499, 400; for 2,500 to 4,999, 700; for 5,000 to 9,999, 1,250; for 10,000 to 15,999, 2,000.

Applications above 16,000 shares will receive one seventh of the amount requested.

The sale, which marks the first big privatisation of an Irish state concern, is of 55 per cent of the shares. Dealings are expected to commence on Friday

BP nightmare haunts sale of stake in BT

By Roland Rudd

AS MINISTERS finalise their proposals for the sale of part of the government's 48.6 per cent stake in British Telecom, the 1987 flotation of British Petroleum is weighing heavily on their minds.

BP was the last major secondary sale, valued at £7.5bn, including a £1.5bn rights issue, and proved something of a nightmare. Although considered a one-off because of the collapse in the stock market government officials believe there is much to be learnt from the issue.

The shares were originally offered at a 20p discount to the 350p market price. But when the world's markets crashed in late October potential investors were looking at a 70p loss.

No-one is expecting a collapse in the market this year; however, even the smallest of movements between pricing the BT sale and trading in the new shares could have a significant effect on the issue.

A fall in the market wipes out potential investors' discounts while a rise leaves the Treasury open to Labour accusations of a giveaway.

Government advisers believe the key lesson from the BP sale is that the time between pricing and trading was too long.

Government sales normally take three weeks, a week to print and send the prospectus after pricing is announced, a week for investors to receive and fill in the form and a final seven days for allocation and processing.

If the prospectus could be sent out without the price officials believe they could shave off seven days. This was suggested in the sale of the regional electricity companies but rejected on the grounds that two weeks can create as much nervousness as three.

For the BT sale to be made BP-proof and immune from market movements the gap between the pricing and trading needs to cut to less than two weeks. Shareholders need a guarantee that their discounts will not be wiped out by movements in the market.

If this can be achieved Government advisers believe they may be able to do without sub-underwriters. (Primary underwriters were dispensed with in the last privatisation).

There are two other main lessons to be learnt from the BP sale.

The first is that ringfencing allocations to different markets is counter-productive. In 1987 BP wanted more shares to be sold abroad.

Government officials now believe it was a mistake not to do so since it would have generated greater competition between the institutions.

The Treasury is expected to introduce more flexibility into the BT sale, allowing more than half of the shares to be sold in foreign markets, creating fierce competition between institutions, thereby maximising the price.

The second lesson is that while advertising can work wonders in druming up interest in a issue – more than 6m people registered for the BP shares – it does not mean that those registered will buy shares. A little more than 200,000 of the 6m parted with their money.

As a result much of the funds earmarked for advertising may end up paying banks and building societies bigger commissions to trade BT shares, making it easier for the small investors to take part in the sale.

Restructured Burnfield turns in £1.41m

BURNFIELD, a manufacturer of electric surface heating systems, returned profits of £1.41m pre-tax and exceptional items for the 11 months to end-December.

For the previous 12 months the group, which has been restructured and now operates under a new management team, achieved pre-tax profits of £2.06m.

Turnover for the period under review totalled £15.31m (£17.03m).

Exceptional items accounted for £701,000 (nil) and tax for £542,000 (£868,000). Extraordinary provisions of £3.06m reflected reorganisation costs and a deferred tax write-off.

Excluding exceptional items, earnings per share emerged at 7.5p (10.8p) basic or at 7p (9.5p) fully diluted.

An unchanged final dividend of 3.85p makes a same-again 5.5p total.

Exchange rate movement hits Kingston Oil & Gas

IN ITS first set of results to be reported in sterling, Kingston Oil & Gas, the production and development group, made £608,624 in 1990, compared with £720,673 in the 18 months to December 31 1989.

Kingston's directors maintained that the conversion from dollars to pounds was adversely affected by exchange rate movements over the period.

Turnover rose to £3.43m (£2.84m for 18 months), but operating profits were down at £583,702 (£699,286). Earnings worked through at 4.86p per share, against 7.07p, and the final dividend is a proposed 1p, to make 1.56p for the year. The total pay-out in the 18-month period was 1.66p.

Last August Kingston bought Orcol Fuels, a waste oil reclamation business, for £4.5m, providing the company with its first UK earnings base.

Clydesdale Inv net assets fall 10%

The net asset value per share of The Clydesdale Investment Trust was 95p at the half-year ended March 31 1991, a fall of 10 per cent from 106.13p at the same time last year.

Total income for the period fell from £369,000 to £295,000, and after interest and expenses of £103,000 (£111,000) pre-tax revenue was left at £192,000 (£258,000).

The interim dividend is unchanged at 1p, and comes from earnings per share down from 1.39p to 1.07p.

UK COMPANY NEWS

Ramco rises to £1.1m and seals Soviet joint venture

By Deborah Hargreaves

RAMCO OIL Services, which provides tubes to the North Sea oil industry, reported pre-tax profits of £1.13m for 1990, compared with £942,000 previously.

The heavy burden of maintenance currently underway in the North Sea, which requires the shutdown of installations, kept turnover static at £4.78m, but Ramco is paying an annual dividend of 2p – its first for five years. Earnings rose 0.1p to 3.96p.

Mr Stephen Remp, chairman, said he was looking for a boost to turnover next year when extensive North Sea maintenance work would be complete.

At the beginning of this year, Ramco set up a joint-venture operation to import oil pumps from the Soviet Union in a bid to capture 10 per cent of the $500m (£292m) western market for electric submersible pumps.

Alnas, the Soviet company which makes the pumps, has taken a 50 per cent stake in the Aberdeen-based venture to market the pumps in the west and two Soviet directors sit on its board.

The first shipment of pumps is due to arrive in June.

In an effort to break into the market, Mr Remp said the company would try to get round any reluctance it encounters among western firms by offering generous guarantees to replace any pump which fails in its first year of operation.

Alnas started making the electric pumps 12 years ago in a bid to reduce the dependence of the Soviet oil industry on imported equipment. Its manufacturing facilities were set up using western technology to make a Soviet-designed pump.

Mr Remp said the high quality of the pumps meant that they could last up to 800 days while western pumps will last 200-600 days. Nevertheless, he said he thought the venture would have to offer some price advantages to make them attractive to western buyers.

Flexible arrangements would also be offered on hire or hire-purchase and giving companies the chance to have the pumps on a trial basis. Alnas is carrying the cost of holding stock by supplying pumps and taking the payment when they are sold.

Stephen Remp: guarantees to replace failed pumps

New EFM trust comes to market

By Philip Coggan, Personal Finance Editor

THE STOCK market's current enthusiasm for split capital investment trusts continues with the £15m flotation of EFM Income Trust.

There are two classes of shares in the trust, managed by Edinburgh Fund Managers. Zero dividend preference shares, with a par value of 25p, are being issued at 35p each. The trust will repay zero holders at 95p per share in the year 2000, a compound growth rate of 11.75 per cent.

Although repayment at that level is not guaranteed, the trust will be able to do so, provided net asset value does not fall between now and 2000.

The ordinary shares, issued at 65p apiece, will be entitled to all the income. EFM expects the yield on the shares to be above that on the FT-A All-Share Index. Net assets of the trust will need to grow at 6 per cent per annum compound for the shares to be repaid at the issue price in 2000.

The trust will invest in the UK, with about 80 per cent in equities and the rest in convertibles, bonds and cash.

Allied Provincial Securities is underwriting and sponsoring the issue, which consists of a placing of 15m of each class of share. Dealings are expected to start on April 29.

How Group declines 19% and warns of bigger fall this year

By Michiyo Nakamoto

HOW GROUP, the Midlands-based building services contractor, warned that profits were likely to be much lower this year as the trading environment remained difficult.

Mr Peter How, chairman, said: "In a recession the bigger companies and the smaller companies come out better and it's the people in the middle who get squeezed. But we're not ultra dispirited."

The group made its forecast as it reported a 19 per cent decline, from £5.18m to £4.21m, in pre-tax profits for 1990.

However, the 1989 figure included £1.15m from investment disposals.

A fall in margins had put pressure on profitability, Mr How said. Margins were down about 1 per cent on order book values.

Turnover rose 6 per cent to £236.58m (£222.83m) while orders overall had fallen about 15 per cent.

The group was particularly hurt by a 20 per cent fall in the engineering division's order books since that accounted for a large proportion of its businesses. Costs associated with delayed orders were a main factor, Mr How said.

On the other hand, the distribution division, which supplies refrigeration and air conditioning machinery, saw its order book climb, helped by the fact that its business was outside the construction industry.

Steps had been taken to try to maintain profit margins, tighten credit controls and cut costs through staff reductions.

Recent bids were on very slim profit margins so that the group has had to be extremely selective in what it tendered for, Mr How said. It still had a net cash position.

Earnings per share were 5.94p (8.32p) and an unchanged final dividend of 2.25p is recommended, holding the total at 3.6p.

In order to bring more accountability to the organisation, the decision-making and managerial functions have been split.

A main board will be responsible for planning and monitoring performance, and a group executive board will be responsible for implementing policies and overseeing the management of divisions.

Mr David Summerfield has taken over as chief executive from Mr Arthur Hogarth, who is retiring as managing director.

Polymark prospects justify 1p dividend

POLYMARK International, the industrial laundry equipment and technographics group, is returning to the dividend list after an absence of 10 years as "medium-term prospects are sufficiently encouraging".

Fully diluted earnings per share benefited from a low tax charge and moved ahead to 5.07p in 1990, against 4.49p. The proposed dividend is 1p.

Pre-tax profit, however, fell from £2.01m to £1.51m in the year. That reflected a substantial reduction in operating income from discontinued activities of £421,000 (£2.51m), which was offset somewhat by an improvement in continuing operations from £237,000 to £594,000 and interest credit of £442,000 (charge of £785,000).

Mr Len Weaver, chairman, said the laundry division held its profit at £352,000 after reorganisation costs of £42,000. In technographics, a programme to improve productivity and enhance margins led to a turnround from a loss of £114,000 to a profit of £242,000.

He said much was done to create a more stable and profitable basis for the continuing operations.

Below the line there was an extraordinary profit of £2.92m, being the final dividend from Polymark France and surplus on the sale of the French division.

COMPANY NEWS IN BRIEF

ARCADIAN INTERNATIONAL has entered into its first development in Spain as part of a consortium acquiring land at El Zaudin, Seville, to build a hotel, and golf and country club resort with 300 luxury houses in a £30m scheme. It has paid £978,000 for 10 per cent of the capital of Zaudin Golf. It has also sold a Glasgow office block for £1.45m.

ASD has agreed to sell 49 per cent of Welbeck Steel Service Centre to Sollac, a subsidiary of Usinor Sacilor, and to sell land and related assets to Welbeck.

ASPEN COMMUNICATIONS has acquired Ravensdale Film and Television, a post production television editing and graphics paintbox facility.

BASS: Recent rights issue accepted in respect of 71.3m shares (89.6 per cent).

BIWATER has bought Spectrascan, a specialist information technology business.

BODY SHOP has acquired Cos-Tec, which supplies some 50 per cent of group's Colourings cosmetic range, for an initial £560,000 cash. Further payments, dependent on Cos-Tec profits in the seven years from end-February 1994, are pitched between a minimum of £1.25m and a maximum of £8.25m.

CARLTON COMMUNICATIONS has entered into a letter of intent to acquire substantially all the assets and certain liabilities of Chyron Corporation of Melville, New York, and Santa Clara, California. Its most important products are characters and graphics generators and electronic editing systems.

CH INDUSTRIALS: The receiver has agreed to sell the Gripperrods International subsidiary as a going concern together with its wholly owned subsidiary Carpet Systems, to Boldfact.

CRAY ELECTRONICS has sold W&J Tod, a composite material engineer, for £1.7m to a management buy-out. 3i provided backing with £1m of equity and loan capital.

DAVIS (GODFREY) has acquired Presco (Holdings) for an initial £3.75m cash. A further £3.15m by way of variable rate loan notes may become payable dependent on profits to December 31 1993. Presco makes and rents relocatable steel buildings and will be incorporated into Elliott Group, Davis' site services division.

DAWSON INTERNATIONAL subsidiary, Pringle of Scotland, has extended its capital expenditure programme to more than £3m for 1990 and 1991.

DERBY TRUST: portfolio valued at £56.19m at March 31 (£48.66m at December 31). Net asset value of the capital shares was 398p (340p). Figures for quarter to March 31 were calculated after taking into account of the issue of 38,285 capital shares with effect from March 31. With immediate effect, company will discontinue publishing the March 31 and September 30 net asset values.

EUROMONEY PUBLICATIONS has acquired 80 per cent of PREP Institute of America, which trades as Amembal Halliday Isom and provides education/consulting and publication services to the leasing industry, for up to $1.7m (£950,000).

EXPEDIER has sold CCI, a clay pigeon maker, to Meadowbell, a new company formed for the purpose, for about £1.65m including repayment of inter-company loans.

FOBEL INTERNATIONAL: new management has found that net assets are likely to be less than 50 per cent of capital of £1.78m. Accordingly, meeting called for May 7 to consider position. Accounts for 1990 will be despatched next month with detailed proposals of reorganisation.

GUERNSEYGAS GROUP: in year to December 31, pre-tax profits were £3.16m (£2.03m) on turnover of £98.92m (£82.48m). Earnings rose to 42.7p (27.6p) and the gross dividend was 22.5p (20p), after a 13.5p final.

JLI GROUP has bought Langwood (Prepared Vegetables) for £721,000 cash, with a possible further maximum payment of £875,000. In 1990 Langwood incurred £205,000 loss on turnover of £4.8m.

MAXIPRINT: The agreement to acquire 96 per cent of Decisionware has been altered. It will now acquire all the shares of Decisionware and will pay £102,000 on completion. Further consideration – up to £1.6m – depends on profits.

McINERNEY PROPERTIES has sold its 85 per cent holding in McInerney Contracting to Mr GT Pierse and others for £4m. Mr Pierse is managing director and holds the other 15 per cent of the shares. The disposal improves liquidity and reduces group future working capital requirements.

OSSORY ESTATES: In its open offer to shareholders, 60.57m new ordinary shares, or 29.29 per cent, have been applied for, with the balance being subscribed by the conditional placees.

PALMA GROUP subsidiary, Clothkits, has sold its trading name and associated trade marks, together with the customer list of its mail order business, to Freemans for £650,000 cash.

Prices for electricity determined for the purposes of the electricity pooling and settlement arrangements in England and Wales.

1/2 hour period ending	Provisional Price for Trading on 23.04.91: Pool purchase price £/MWh	Final Prices for Trading on 28.03.91: Pool purchase price £/MWh	Final Prices for Trading on 28.03.91: Pool selling price £/MWh
0030	16.18	17.56	17.56
0100	16.91	28.73	28.56
0130	17.04	28.50	30.36
0200	25.73	28.60	30.38
0230	27.42	17.80	17.80
0300	27.42	16.91	16.91
0330	23.44	16.34	16.34
0400	18.48	15.66	15.66
0430	18.43	15.55	15.55
0500	16.66	15.50	15.50
0530	16.36	15.56	15.56
0600	16.32	15.66	15.66
0630	17.04	16.35	16.35
0700	20.06	18.67	20.35
0730	23.51	19.96	21.70
0800	24.62	23.29	25.16
0830	25.51	25.06	27.00
0900	25.76	25.43	27.43
0930	25.11	25.66	27.69
1000	24.66	25.66	27.69
1030	24.36	25.60	27.52
1100	24.30	25.47	27.48
1130	24.39	25.67	27.75
1200	24.34	25.90	28.02
1230	24.07	25.69	27.74
1300	23.76	25.33	27.31
1330	23.51	24.91	26.79
1400	23.43	24.21	26.07
1430	18.48	23.24	25.06
1500	23.41	23.23	25.05
1530	23.46	20.99	22.74
1600	23.47	23.43	25.31
1630	23.62	26.42	28.48
1700	23.55	26.70	28.77
1730	23.64	26.54	28.56
1800	23.60	26.08	28.01
1830	23.44	23.60	25.75
1900	20.66	28.33	30.53
1930	20.06	28.62	31.45
2000	20.06	27.86	30.04
2030	20.06	25.91	27.86
2100	24.50	25.38	27.23
2130	24.50	22.24	23.99
2200	24.50	22.23	23.97
2230	23.66	22.23	23.96
2300	20.02	19.56	21.23
2330	20.02	16.63	16.63
2400	16.28	15.54	15.54

Prices are determined for every half-hour in each twenty-four hour period. Prices are in pounds per megawatt-hour, rounded to two decimal places. To convert prices to pence per kilowatt-hour the decimal point should be moved one place to the left, eg £16.66/MWh becomes 1.666p/KWh. Provision for the determination of pool prices is made in the Pooling and Settlement Agreements which govern the operation of the electricity pool in England and Wales. The Pool Purchase Price is the basis of the majority of payments made to generators in respect of electricity traded through the pool. The provisional Pool Purchase Price is subject to revision or correction until final pool prices are determined approximately twenty-four days after the day of trading. Pool Selling Price is the price paid by purchasers of electricity under the pool trading arrangements. It is dependent upon the determination of Pool Purchase Price. Final pool prices are also capable of revision.

NGC Settlements Limited

FT LAW REPORTS

Gas staff to get compensation for retirement inequality

FOSTER AND OTHERS v BRITISH GAS PLC
House of Lords (Lord Keith, Lord Templeman, Lord Ackner and Lord Jauncey):
April 18 1991

BRITISH GAS is a state controlled statutory body with special monopoly powers for the provision of public services and accordingly, though it is a commercial enterprise, its employees, like public sector employees, can rely directly on the European Community equal treatment Directive when complaining of a discriminatory retirement policy operating before UK enactment of equality legislation.

The House of Lords so held when allowing an appeal by Mrs M Foster and five other female employees of British Gas plc (formerly the British Gas Corporation), from a Court of Appeal decision that they were not in a position to seek compensation against British Gas for discrimination on grounds of sex.

LORD TEMPLEMAN said that article 5 of the EC equal treatment Directive of February 9 1976, provided that member states of the EC should apply the principle of equal treatment to working conditions, so that "men and women shall be guaranteed the same conditions without discrimination on grounds of sex".

The UK took the view that the Directive did not render unlawful a rule that men and women must retire at pensionable age, even if that meant that women must retire at 60 whereas men need not retire before 65.

In *Marshall [1986] QB 401* the European Court of Justice ruled that a general policy of retiring women when they reached pensionable age at 60 and men when they reached pensionable age at 65, was an infringement of the equal treatment Directive.

The Court reiterated that a member state which had not adopted measures to give effect to the Directive "may not plead as against individuals, its own failure to perform the obligations which the Directive entails".

It ruled that where a person involved in legal proceedings was able to rely on a Directive as against the state, he might do so regardless of the capacity in which the state was acting, whether employer or public authority.

It said, "In either case it is necessary to prevent the state from taking advantage of its own failure to comply with Community law."

As a result of *Marshall* section 2 of the Sex Discrimination Act 1986, which came into force on November 7 1987, rendered unlawful any discrimination by any person against a woman in relation to retirement age, so that the anomaly between employees in the public sector who could rely on the equal treatment Directive, and employees in the private sector who could not, was eliminated.

The position remained, however, that a woman in the public sector who was discriminated against by retirement between February 9 1976 and November 7 1987, might be able to obtain compensation for breach of the Directive.

British Gas had a policy that women should retire at 60 and men at 65.

It was clear that it infringed the Directive. The appellant employees were compulsorily retired between December 27 1985 and July 22 1986.

They claimed compensation for unlawful discrimination.

The House of Lords referred to the European Court the question whether British Gas was a body of such a type that the appellants were entitled to rely directly on the Directive.

The Court gave its ruling on July 12 1990.

By paragraph 22 it said that article 5 (1) of the Directive might be relied on in a claim for damages against "a body whatever its legal form which has been made responsible, pursuant to a measure adopted by the state, for providing a public service under the control of the state and has for that purpose special powers beyond those which result from the normal rules applicable in relations between individuals".

Accordingly, the question for the House was whether British Gas was such a body.

By the 1972 Gas Act, replacing the 1965 Act and repealed by the 1986 Act, the British Gas Corporation was established as a body corporate.

The secretary of state was authorised to make regulations with regard to the appointment, tenure and vacation of office by Corporation members.

Section 2 provided that it was the Corporation's duty to develop and maintain an efficient and co-ordinated system of gas supply for Great Britain.

Thus British Gas was a body which was made responsible pursuant to a measure adopted by the state, for providing a public service.

By section 4 the Corporation was directed to report to the minister, who was authorised to give it appropriate directions for securing its efficient management.

By section 7 he was authorised to give it general directions as to the exercise and performance of its functions in relation to matters affecting national interest.

By section 8 it was ordered to report annually to the minister on the exercise and performance of its functions, policy and programmes.

By section 29 of the 1972 Act, "no person other than the Corporation shall ... supply gas to any premises except with the consent of the Corporation".

That section conferred on British Gas "special powers beyond those which result from the normal duties applicable in relations between individuals".

Accordingly, British Gas was a body which was made responsible pursuant to a measure adopted by the state for providing a public service under the control of the state and had, for that purpose, special powers beyond those which resulted from the normal rules applicable in relations between individuals.

British Gas could therefore not take advantage of the state's failure to comply with the equal treatment Directive.

The appellants' complaints of unlawful discrimination were dismissed by the industrial tribunal and the Court of Appeal on the ground that, for the purposes of the Directive, British Gas was a private individual against whom the Directive could not be enforced.

Before the European Court and before the House, British Gas repeated the arguments which had found favour in the courts below.

It submitted it was a statutory corporation engaged in commercial activities; it did not perform any of the traditional functions of the state; and it was not the agent of the state.

It argued that the European Court could not have intended to made the Directive enforceable against a commercial concern.

Those submissions were irrelevant to the tests laid down in the Court's ruling.

The sole question were whether British Gas, pursuant to a measure adopted by the state, provided a public service under the control of the state, and exercised special powers.

British Gas admitted that pursuant to the 1972 Act it provided a public service in the supply of gas for citizens generally.

However, itsubmitted that the secretary of state did not possess the control contemplated by the Court because it had wide powers in the performance of its functions.

It submitted that monopoly in the supply of gas was not a "special power" contemplated by the Court, and that the Court in its ruling had not clearly provided that nationalised industries carrying out commercial functions were to be regarded as organs of the state.

The principle laid down by the European Court was that the state must not be allowed to take advantage of its own failure to comply with EC law.

British Gas's policy which involved discrimination against women in breach of the Directive,was no doubt thought to be in its commercial interests.

The advantages of that policy would accrue indirectly to the state which provided, through British Gas, a supply of gas for citizens generally and was entitled to surplus revenue.

If British Gas were allowed to escape the consequences of an admitted breach of the Directive, the state would be taking advantage of its own failure to comply with EC law.

In those circumstances there was no justification for a narrow or strained construction of the Court's ruling.

Applying the words of the ruling, the 1972 Act created a body which provided a public service to citizens generally under the control of the state, which could dictate its policies and retain its surplus revenue.

British Gas had a special monopoly power created by the legislature. It was therefore a body against which the Directive might be enforced.

The appeal was allowed. The proceedings were restored to the industrial tribunal to assess compensation.

Their Lordships agreed.

For the appellant employees: James Goudie QC and John Cavanagh (Bruce Piper & Co). For British Gas: Michael Beloff QC and Elizabeth Slade (CEH Twiss, British Gas solicitor).

Rachel Davies
Barrister

Fears for farm budget if price ceiling ignored

By David Gardner in Luxembourg

THE European Commission expects the EC farm budget to run out of money before the end of the year, if the community's agriculture ministers continue to fail to agree to stay within the mandatory ceiling, or "guideline", on farm price support.

Brussels is understood to have calculated that the first cash shortages in the Common Agricultural Policy will appear around October, if ministers push the tangled debate over this year's price package into June.

Such a delay looked altogether likely last night, as the council of agriculture ministers began their third attempt since February to fix this year's prices – by agreeing that any accord would have to wait until next month at the earliest.

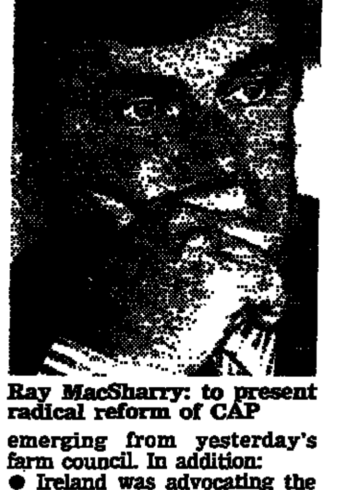
Ten of the 12 farm ministers reiterated their demands that the ceiling be raised to take account of what they claim is the unforeseen cost of integrating east German farms into the CAP.

Led by France and Ireland, they want to soften the cuts proposed by the commission on February 27.

These cuts are intended to limit the rise in farm spending this year to Ecu7.4bn, a record 30 per cent leap from last year, touching the ceiling of Ecu32.5bn ($40bn).

Only the UK, and, with some dithering, the Netherlands, are holding fast to the guideline, both in the council of farm ministers and finance ministers, whose unanimous agreement would be needed to breach it.

The UK's fiscally rigid stance was one of three



Ray MacSharry: to present radical reform of CAP

emerging from yesterday's farm council. In addition:

● Ireland was advocating the adoption of the guideline but creation of "an ad hoc mechanism", a special reserve, in case it is broken. In common with France and others, the Irish believe the commission has overreacted to one-off effects like that of the "mad cow" scare and the Gulf crisis on the beef market, has exaggerated overproduction trends, is overly pessimistic about world farm prices, and has misjudged how fast the dollar is strengthening, reducing the cost of export subsidies.

● France appears still to want to take the wrangle to the European summit due in June, in the hope of winning sanction for a higher guideline, having failed to get it on to the agenda of the special summit here on April 8, devoted almost entirely to the Kurdish emergency.

The finance ministers meeting which took place alongside that summit replicated the 10-2 division among farm ministers over the guideline. But it was a European summit, in Brussels in February 1988, which set the yearly ceilings.

The Irish idea of a special reserve would, commission and UK officials say, require the unlikely unanimity of the finance ministers.

However, one of its underlying premises – that Brussels has done its sums wrong – appears to be buttressed by figures from the commission's periodic "early warning system" survey of expenditure. These show that price support to the end of this month has been underspent by Ecu1.1bn. France also pressed last night for an update.

But commission officials maintain that the seeming underspend is because certain member states, Italy in particular, are behind in paying out subsidies to their farmers.

They also dismiss the contention that the stronger dollar will save the guideline, since its effect will not feed through until next year.

There is concern in the commission, however, that if a summit were to address farm spending, it might fix guidelines into the future, and queer the pitch for the radical reform of the CAP which Mr Ray MacSharry, EC agriculture commissioner, is due to present in detail by July.

Its preferred alternative may in the end be simply to roll over last year's price package, keep formally within the 1991 guideline and pass on surplus spending to next year, when it hopes to start the reform.

Mining tax cuts as emergency is declared

By Sally Bowen in Lima

PRESIDENT ALBERTO Fujimori has declared a state of emergency in the Peruvian mining industry and announced tax concessions to give the beleaguered sector a breathing space.

From July, small and medium-sized mines will be exempted from the current 5 per cent emergency tax on copper export. Output from mines in this category is worth $750m (£441m) a year, or over a third of Peru's earnings from mining. Peru's important silver mining sector will also benefit from new "drawback" measures which allow it to reclaim income and business equity taxes.

Although the measures were welcomed by Mr Luis Rodriguez Mariategui, head of the National Mining Society, (SNM), it is not clear whether they are in time to save about 14 medium-sized mines under threat of closure. For example Huaron, a leading silver, zinc and lead producer has been losing $800,000 a month since January and is now said to have debts of almost $13m.

President Fujimori: new laws more flexible

While plummeting international silver prices mean that silver producers have been worst hit, the entire sector is in poor shape. Preliminary figures for 1990 indicate that direct losses may be around $130m, close to those registered in 1986, the worst year in the last decade. State-owned giant Centromin lost $50m last year and is contemplating drastic personnel cuts. Only five mining companies reported profits last year, according to preliminary data – Southern Peru Copper, Orcopampa, Milpo, Simsa and Arcata.

Copper output fell 13 per cent in 1990 from 1989, while silver and iron production declined 15 and 20 per cent respectively. Spare parts and maintenance problems at HierroPeru, the country's sole iron producer, meant a fall in iron output from 2.9m tons in 1989 to 2.1m last year. High international metals prices partially masked the crisis – but this year is likely to be worse, according to industry sources.

Speaking at the close of the national Mining Engineers' Convention in Lima, President Fujimori acknowledged the importance of the mining industry. It generates over half of all foreign exchange earnings and employs one in five of the population. The solution to the sector's problems, he recognised, lay in a more realistic exchange rate and lower interest rates.

The dollar-inti exchange rate has scarcely moved since December. The inti is over-valued by a factor of three, according to the mining industry. Mr David Ballon, president of the Mining Engineers' Institute says the sector has lost $1.62bn in the last two years alone through exchange rate lag. This has meant low levels of reinvestment and failure to spend on exploration. Many mines' proven reserves are now perilously low.

Short-term debts also plague the sector. Mines have been forced to borrow heavily to pay taxes levied on total sales, rather than profits and run between 20 and 30 per cent of turnover. Interest rates exceed 20 per cent a month, in spite of a gradual fall in inflation, down to 7.7 per cent last month. Mining companies' debt positions have been exacerbated by Centromin's failure for the past several months to pay suppliers.

Participants from abroad at the convention emphasised the need for Peru to stabilise tax policies and standardise contracts along Chilean lines.

Their call appeared to have been heard by President Fujimori, who promised in his closing speech a decree to promote mining investment under extraordinary facilities recently granted by parliament. This, he said, would make laws "more flexible," attract risk capital and favour joint ventures.

If the main problem for Peruvian miners continues to be the exchange rate, there is another to which there is no solution yet in sight – terrorism. The SNM counts 304 terrorist actions directed at mining companies during the last decade, mainly with the object of stealing explosives and other supplies. Attacks have left 62 dead, it calculates, with a disturbing recent rise – 14 mining employees were killed in remote mountain camps in December 1990 alone.

Nickel development plans as prices boost confidence

By Robert Gibbens in Montreal

FIRM NICKEL prices and the prospect of sustained global growth have persuaded Falconbridge Ltd to commit C$35m (£17.6m) to underground development at its remote Raglan property in northern Quebec over the next 18 months.

Falconbridge, owned 50-50 by Noranda and Trelleborg of Sweden, is discussing developing a mine at Raglan with annual output of 20,000 tonnes of nickel. The cost would be around C$375m, including infrastructure.

The property has been long known as Falconbridge's "perennial mine of tomorrow". The deposit was found after World War II by the late Mr Murray Watts, one of Canada's most successful mine finders. He was looking for uranium as well as precious and base metals.

Falconbridge bought control of the property in 1957 and spent many millions of dollars outlining the deposit. However, its location north of Schefferville and the northern rail terminus, ruled out development.

Raglan is nearly 1,000 miles north east of Montreal and only 60 miles south east of Deception Bay, on Hudson Strait, the shipping point for the former Asbestos Hill mine. During the seventies asbestos fibre was mined openpit and shipped for refining at Nordenheim in Germany until the US Environmental Protection Agency finally knocked the bottom out of the international asbestos market.

Last month, the ice-breaking freighter Arctic, used to move zinc ores from the central Arctic to European refineries, successfully navigated the forbidding ice in Deception Bay, tying up at the old asbestos dock.

This means the old three-month shipping season for asbestos can be extended to eight months, helping Raglan's economics significantly. The mine could operate year-round and production for four months stockpiled.

Falconbridge will spend C$20m at Raglan this year alone and has begun a full feasibility study. Most of the money will go for an underground ramp, lateral work and drilling.

Raglan is a series of deposits along a 30-mile strike length. Estimated reserves are 18m tonnes averaging 3.13 per cent nickel and 0.88 per cent copper in one group of mineralised zones. But total reserves are believed much larger.

In terms of grade Raglan is the best undeveloped sulphide deposit anywhere, believes Falconbridge.

The mine would be a fly-in/fly-out operation. A rail connection with Schefferville was considered in the past, but the rugged terrain makes the prohibitive. The tree line ends just north of Schefferville and the permafrost then begins.

Potentially, Raglan could increase Falconbridge's annual nickel output by 25 to 30 per cent by 1996. Last year Falconbridge produced 62,000 tonnes from its mines in Sudbury, Ontario, and in the Dominican Republic.

Nickel prices are around US$4 a lb and many forecast tightness in supply because of problems in the Soviet Union. Together the Soviet Union and Cuba have been supplying between 12 and 15 per cent of western demand.

Falconbridge says production in Sudbury and Dominican Republic will remain flat for the next few years and Raglan would help retain its world market share.

Government C$425m support package criticised as too little

By Robert Gibbens in Montreal

CANADA'S federal government plans to bolster 1991 farm income by C$425m (£214m) this spring through its Farm Support and Adjustment Programme.

It claims that this will bring realised farm income to C$ 3.3bn from $3bn in 1990. Realised income is operating profit after depreciation.

But both western and eastern farm groups said that this would not be nearly enough to counter the farm crisis, particularly on the prairies.

Incomes will remain under pressure from the continuing wheat trade war between the US and Europe, and the impact of Canada-US free trade on horticulture.

Western groups were the most critical. The Saskatchewan Wheat Pool said that the prairies alone needed C$1.3bn this year to offset low prices and "they gave us $200m."

However, Mr Donald Mazankowski, the federal agriculture minister, said that the government "just doesn't have the dollars."

The Farm Support programme replaces emergency annual bail-outs, with income insurance designed to guarantee participating farmers 90 per cent of long-term average income in case of crop disasters or low commodity prices.

Further changes in the system are due next year.

The federal government picks up part of the premiums but most provinces have delayed their contributions and farmers have been slow to sign up. Mr Mazankowski agrees that the premiums are high.

The government has also announced modest help for horticulture and direct financial incentives to prairie farmers to take marginal land out of production.

Amax optimistic of a bright outlook for aluminium

By Kenneth Gooding, Mining Correspondent

ALUMINIUM'S OUTLOOK remains exceptionally bright, in spite of the present very low prices, according to Mr Alan Born, chairman of Amax, the third-largest US aluminium producer.

He told London analysts and institutional investors that he predicted the market would be about balanced – as long as there is no sharp deterioration in economic growth in Europe or Japan. His view contrasts with that of most analysts who expect a supply surplus this year.

Mr Born admitted that very few of the west's aluminium smelters were profitable at today's prices. "But we think the market is at or near the bottom of the current price cycle," he said.

Market sentiment had not been helped by the delivery to the west of about 100,000 tonnes of aluminium from the Soviet Union in the past 30 days.

Aluminium for immediate delivery closed at 62.79 cents a lb on the London Metal Exchange last night. Mr Born suggested 80 to 85 cents a lb was more likely to be a sustainable price.

The highest-cost smelters were in Europe and cuts would probably come in this region, he pointed out. Some of the older smelters in North America, which were benefiting from power contracts related to aluminium prices, might close as their power contracts came up for renegotiation.

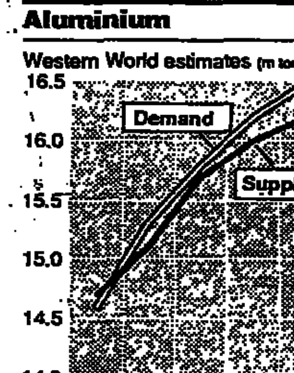
Amax estimated that primary aluminium demand would rise from 14.6m tonnes this year to 16.2m tonnes in 1995. This forecast indicated that a new 200,000-tonne smelter was required every second year, Mr Born said. But he added: "I don't see that happening. Not enough new smelters are being built."

The group had enough faith in its forecasts to invest heavily in new primary aluminium capacity. It had a 25 per cent interest in the recently-completed expansion of the Becancour smelter in Quebec and was constructing a US$1bn, wholly-owned smelter at Deschambault, also in Quebec.

Together these projects would add about 50 per cent to Amax's primary aluminium

Aluminium

Western World estimates (m tonnes)



Source: Amax

capacity, taking it to an annual 750,000 tonnes. About 20 per cent of this would be surplus to Amax's own requirements.

More than two-thirds of Amax's capacity by 1992 would be based on hydro-electric power, up from just over 49 per cent at present, and would put its costs "among the lowest of the low."

Amax also expected to go ahead with the proposed $1bn (£588m) Atlantal smelter in Iceland in which it would have a 40 per cent interest.

Mr Paul Drack, president of Alumax, the group's aluminium subsidiary, said negotiations about power contracts for the Iceland project were almost completed but capital costs needed to be trimmed and government permission to use foreign workers would be required. He hoped the Iceland smelter could be operating in 1995.

WORLD COMMODITIES PRICES

MARKET REPORT

Copper prices held steady in dollar terms on the LME yesterday, but lacked the incentive to test resistance between $2,440 and $2,450 a tonne for three-month metal. Dealers said an earlier rally was underpinned by continued demand for May delivery metal. Because of this technical strength the market is shrugging off fundamental weakness, such as rising supplies and high inventories. Zinc prices lost early gains in the afternoon under general selling and liquidation. Traders said the possibility that today's LME stock figures will show a further increase set prices back on the downward path seen during the second half of last week. The cash to three months delivery backwardation fluctuated between $30 and $40 a tonne as traders watched for any signs of a renewed flare-up in the tightness which pushed the backwardation out to $240 a tonne last week. Aluminium prices closed easier; although IPAI data for March showed a daily average fall in production of 400 tonnes to 40,200 tonnes it made little impact. The fall was expected following a power failure that halved March output at Brazil's Albras smelter; the figures did not show any signs of producer restraint elsewhere.

Compiled from Reuters

London Markets

SPOT MARKETS		
Crude oil (per barrel FOB)		+ or -
Dubai	$15.70-7.85u	+0.60
Brent Blend (dated)	$19.70-9.75	+0.60
Brent Blend (Jun)	$19.60-9.65	+0.65
W.T.I. (1 pm est)	$21.40-1.45u	+0.75
Oil products (NWE prompt delivery per tonne CIF)		+ or -
Premium Gasoline	$247-249	+1
Gas Oil	$193-194	+6
Heavy Fuel Oil	$70-72	
Naphtha	$203-205	-2
Petroleum Argus Estimates		
Other		+ or -
Gold (per troy oz)✤	$357.30	+0.85
Silver (per troy oz)✤	398.50c	+4.00
Platinum (per troy oz)	$387.50	-6.75
Palladium (per troy oz)	$96.75	
Aluminium (free market)	$1380	-15
Copper (US Producer)	114½c	+½
Lead (US Producer)	33c	
Nickel (free market)	422c	-2
Tin (Kuala Lumpur market)	14.80r	+0.04
Tin (New York)	259c	
Zinc (US Prime Western)	62c	
Cattle (live weight)†	111.93p	+0.61*
Sheep (dead weight)†	233.87p	+28.0*
Pigs (live weight)†	88.18p	+1.26*
London daily sugar (raw)	205.0t	-2.0
London daily sugar (white)	$268.0t	-2.0
Tate and Lyle export price	£227.0	+0.5
Barley (English feed)	£124	
Maize (US No. 3 yellow)	£178	
Wheat (US Dark Northern)	£97	
Rubber (May)♥	52.75p	+0.50
Rubber (Jun)♥	53.50p	+0.50
Rubber (KL RSS No 1 May)	226.5m	
Coconut oil (Philippines)§	$330q	+5
Palm Oil (Malaysian)§	$327.5s	+7.5
Copra (Philippines)§	$220x	
Soyabeans (US)	£160.0	+6.0
Cotton "A" index	83.60c	+0.10
Wooltops (64s Super)	344p	+2

£ a tonne unless otherwise stated. p-pence/kg. c-cents/lb. r-ringgit/kg. q-Jun/Jul t-May/Jun u-Jun. x-Jul/Aug. s-Apr/Jun. †Meat Commission average fatstock prices. * change from a week ago. ♥London physical market. §CIF Rotterdam. ✤ Bullion market close. m-Malaysian cents/kg.

SUGAR – London FOX			($ per tonne)	
Raw	Close	Previous	High/Low	
May	177.60	175.00	178.00	173.00
Aug	178.60	175.00	179.80	174.60
Oct	179.00	176.00	180.00	175.40
Dec	180.00	176.00	175.00	173.00
Mar	179.00	175.00	179.20	176.00
May	180.00	177.40	180.00	177.00
Aug	184.00		184.00	
White	Close	Previous	High/Low	
Aug	270.0	261.9	267.5	262.0
Oct	251.5	244.0	248.5	244.9
Dec	249.5		243.0	
Mar	252.5	245.0	247.5	245.4
May	257.5	248.9	253.0	250.9
Aug	267.5	260.0	258.2	

Turnover: Raw 2586 (3360) lots of 50 tonnes. White 473 (497)
Paris- White (FFr per tonne): Aug 1583, Oct 1482.

CRUDE OIL – IPE			$/barrel	
	Latest	Previous	High/Low	
Jun	19.58	19.14	19.65	19.06
Jul	19.30	18.95	19.35	18.89
Aug	19.20	18.83	18.90	
Sep	19.14	18.85	19.15	18.80
Oct	18.90	18.85	18.80	
IPE Index	19.07	19.21		

Turnover 12231 (12773)

GAS OIL – IPE			$/tonne	
	Close	Previous	High/Low	
May	185.25	178.50	186.50	179.75
Jun	179.75	173.25	180.00	174.75
Jul	176.25	170.50	176.50	172.50
Aug	177.75	172.50	178.00	173.75
Sep	179.50	174.25	175.50	175.50
Oct	181.75	176.75	182.00	177.50
Nov	183.25	178.25	179.50	
Dec	183.50	178.50	184.00	180.00

Turnover 7817 (8841) lots of 100 tonnes

INDICES

REUTERS (Base: September 18 1931 = 100)			
Apr 22	Apr 19	mnth ago	yr ago
1737.9	1728.9	1721.4	1927.6

DOW JONES (Base: Dec. 31 1974 = 100)				
	Apr 18	Apr 17	mnth ago	yr ago
Spot	126.69	126.19	124.78	138.01
Futures	128.13	128.54	129.42	133.93

LONDON METAL EXCHANGE	(Prices supplied by Amalgamated Metal Trading)					
	Close	Previous	High/Low	AM Official	Kerb close	Open Interest
Aluminium, 99.7% purity ($ per tonne)					Total daily turnover 24,030 lots	
Cash	1383-5	1396-7	1384	1384-5		
3 months	1416-7	1426-7	1419/1412	1415-6	1414-5	69,014 lots
Copper, Grade A (£ per tonne)					Total daily turnover 13,210 lots	
Cash	1489-91	1458-60	1487/1471	1474-5		
3 months	1456-7	1429-30	1457/1438	1441.5-2.5	1454-5	102,089 lots
Lead (£ per tonne)					Total daily turnover 4,471 lots	
Cash	347-8	338-9		346-7		
3 months	353.5-4	349.5-50.5	359/352.5	352.5-3	356-7	21,080 lots
Nickel ($ per tonne)					Total daily turnover 1,780 lots	
Cash	9150-60	9110-20	9170	9080-90		
3 months	9125-40	9101-3	9150/9025	9050-5	9125-30	8,984 lots
Tin ($ per tonne)					Total daily turnover 1,001 lots	
Cash	5510-5	5520-30		5520-5		
3 months	5505-10	5610-20	5620/5610	5615-20	5600-05	5,288 lots
Zinc, Special High Grade ($ per tonne)					Total daily turnover 6,248 lots	
Cash	1215-8	1200-3	1225/1220	1223-5		
3 months	1175-8	1169-70	1183/1165	1182-3	1167-8	24,561 lots

LME Closing £/$ rate:
SPOT: 1.6935 3 months: 1.6709 6 months: 1.6537 9 months: 1.6390

LONDON BULLION MARKET
(Prices supplied by N.M.Rothschild)

Gold (fine oz)	$ price	£ equivalent
Close	357.00-357.60	
Opening	356.00-355.40	
Morning fix	358.25	207.896
Afternoon fix	356.40	209.155
Day's high	357.00-357.60	
Day's low	355.00-355.40	

Loco Ldn Mean Gold Lending Rates (Vs US$)			
1 month	5.51	6 months	5.36
2 months	5.47	12 months	5.25
3 months	5.48		

Silver fix	p/fine oz	US cts equiv
Spot	229.15	392.00
3 months	235.65	397.65
6 months	242.00	403.75
12 months	254.45	417.50

GOLD COINS
(Prices supplied by Engelhard Metals)

	$ price	£ equivalent
Krugerrand	357.00-358.00	209.50-210.00
Maple leaf	366.00-367.00	214.75-215.25
New Sovereign	86.00-87.00	50.50-51.00

TRADED OPTIONS

Aluminium (99.7%)	Calls		Puts	
Strike price $ tonne	May	Jun	Apr	Jun
1300	94	119	5	75
1400	13	50	19	37
1500	5	14	108	100
Copper (Grade A)	**Calls**		**Puts**	
2400	108	95	2	53
2500	30	48	23	105
2600	3	21	95	177
Coffee	**Jul**	**Sep**	**Jul**	**Sep**
550	119	103	0	10
600	73	67	4	24
650	35	41	16	48
Cocoa	**Jul**	**Sep**	**Jul**	**Sep**
600	27	22	21	47
650	10	10	54	65
700	3	4	97	129
Brent Crude	**Jun**	**Jul**	**Jun**	**Jul**
1850				
1950				
2000	45			

COCOA – London FOX			£/tonne	
	Close	Previous	High/Low	
May	644	642	644	635
Jul	669	669	669	660
Sep	693	693	693	685
Dec	724	723	725	716
Mar	754	753	753	746
May	775	773	772	766
Jul	794	793	794	790

Turnover: 7268 (5693) lots of 10 tonnes
ICCO indicator prices (SDRs per tonne). Daily price for Apr 19 845.46 (862.86) 10 day average for Apr 22 853.59 (853.68)

COFFEE – London FOX			£/tonne	
	Close	Previous	High/Low	
May	583	575	583	567
Jul	608	595	607	588
Sep	626	613	625	607
Nov	642	632	639	625
Jan	660	648	656	644
Mar	670	658	662	656

Turnover: 7951 (5333) lots of 5 tonnes
ICO indicator prices (US cents per pound) for Apr 19 : Comp. daily 70.71 (72.18). 15 day average 72.40 (72.57)

POTATOES – London FOX			£/tonne	
	Close	Previous	High/Low	
May	135.9	138.0	138.0	133.1
Apr	133.5	132.8	133.5	131.5

Turnover 75 (222) lots of 40 tonnes.

SOYAMEAL – London FOX			£/tonne	
	Close	Previous	High/Low	
Jun	125.00	122.00	126.00	122.50
Aug	127.00	122.50	127.00	125.00
Oct	129.00	127.50	129.00	

Turnover 521 (182)lots of 20 tonnes.

FREIGHT – London FOX			$10/index point	
	Close	Previous	High/Low	
Apr	1611	1603	1615	1610
May	1579	1559	1586	1570
Jul	1262	1249	1265	1260
BFI	1598	1596		

Turnover 279 (380)

GRAINS – London FOX			£/tonne	
Wheat	Close	Previous	High/Low	
May	139.00	139.00	139.30	139.00
Jun	141.00	140.70	141.30	140.90
Sep	110.60	111.10	110.60	110.60
Nov	113.60	114.25	113.95	113.60
Mar	120.40		120.40	
May	123.60		123.60	
Barley	Close	Previous	High/Low	
May	118.25	117.85	118.50	118.25

Turnover: Wheat 220 (115). Barley 54 (20).
Turnover lots of 100 tonnes.

PIGS – London FOX		(Cash Settlement) p/kg		
	Close	Previous	High/Low	
May	114.5	113.8	114.0	
Jun	116.5	115.5	116.0	
Jul	117.0	115.5	116.5	116.0
Aug	116.5	115.5	116.5	115.5
Sep	116.5	115.5	116.5	116.0
Oct	116.5	115.5	116.5	116.0
Nov	116.0	115.5	116.0	115.5
Jan	113.0		112.5	112.0

Turnover: 162 (127) lots of 3,250 kg

MGMI – London FOX				
	Close	Prev.	High	Low	Vol
Indx	153.37	153.98			
May	153.10	153.50	153.10		117
Jun	153.20	153.70	153.20	152.80	118
Sep	152.90	153.00	152.90	152.10	52
Dec	152.80	153.50	152.80	152.50	18
Mar	152.50	153.20	152.50		8

New York

GOLD 100 troy oz.; $/troy oz.				
	Close	Previous	High/Low	
Apr	357.8	356.7	356.0	355.8
May	358.2	357.4	0	0
Jun	359.7	359.0	360.3	357.5
Aug	362.7	362.0	363.0	360.8
Oct	366.0	365.3	364.5	364.2
Dec	363.9	368.6	369.5	367.2
Feb	372.7	372.0	0	0
Apr	376.0	375.3	375.3	0
Jun	379.5	378.9	0	0

PLATINUM 50 troy oz; $/troy oz.				
	Close	Previous	High/Low	
Apr	390.9	392.1	389.0	0
Jul	394.9	396.1	396.0	390.0
Oct	398.8	400.0	400.0	395.0
Jan	402.2	403.3	402.0	401.4
Apr	406.2	407.3	405.5	0
Jul	410.7	411.8	0	0

SILVER 5,000 troy oz; cents/troy oz.				
	Close	Previous	High/Low	
Apr	393.1	390.5	0	0
May	393.5	391.0	396.5	388.0
Jun	395.8	393.3	0	0
Jul	398.4	395.8	401.0	393.0
Sep	403.3	400.9	406.5	398.5
Dec	410.3	408.0	413.0	405.0
Jan	412.7	410.4	0	0
Mar	418.0	415.7	418.5	0
May	423.3	421.0	0	0
Jul	428.7	426.4	0	0

HIGH GRADE COPPER 25,000 lbs; cents/lbs				
	Close	Previous	High/Low	
Apr	109.90	110.60	111.25	109.90
May	110.25	110.85	112.10	110.10
Jun	109.40	109.90	110.40	109.40
Jul	108.50	109.00	110.10	108.50
Aug	107.85	108.30	0	0
Sep	107.15	107.55	108.20	107.30
Oct	106.50	106.85	0	0
Nov	106.20	106.55	0	0
Dec	105.45	105.80	106.10	105.90
Jan	[illegible]	[illegible]	[illegible]	[illegible]

CRUDE OIL (Light) 42,000 US galls $/barrel				
	Latest	Previous	High/Low	
May	21.83	21.13	21.87	21.20
Jun	21.42	20.93	21.50	21.03
Jul	21.11	20.66	21.15	20.75
Aug	20.94	20.52	20.94	20.65
Sep	20.76	20.42	20.78	20.60
Oct	20.70	20.34	20.70	20.39
Dec	20.50	20.25	20.50	20.30
Jan	20.48	20.20	20.46	20.24
Feb	20.43	20.15	20.43	20.25

HEATING OIL 42,000 US galls, cents/US galls				
	Latest	Previous	High/Low	
May	5790	5606	5820	5650
Jun	5705	5542	5740	5570
Jul	5690	5535	5725	5590
Aug	5730	5585	5765	5655
Oct	5975	5813	5975	5880
Nov	6015	5805	6040	5990
Jan	6140	6005	6145	6060
Feb	6000	5885	6020	5940

COCOA 10 tonnes;$/tonnes				
	Close	Previous	High/Low	
May	1040	1048	1043	1033
Jul	1065	1074	1067	1053
Sep	1096	1105	1097	1084
Dec	1139	1144	1139	1127
Mar	1168	1182	1169	1160
May	1198	1207	1197	1185
Jul	1224	1232	1221	1211

COFFEE "C" 37,500lbs; cents/lbs				
	Close	Previous	High/Low	
May	89.80	88.70	90.10	89.00
Jul	91.85	91.15	92.40	91.35
Sep	93.90	93.40	94.50	93.65
Dec	96.80	96.55	97.50	96.75
Mar	99.70	99.60	100.50	0
May	101.90	101.65	102.45	0
Jul	103.75	103.15	104.50	0
Sep	105.60	104.60	0	0

SUGAR WORLD "11" 112,000 lbs; cents/lbs				
	Close	Previous	High/Low	
May	8.06	7.90	8.16	7.90
Jul	8.01	7.84	8.10	7.86
Oct	7.97	7.83	8.04	7.88
Mar	7.97	7.86	8.04	7.94
May	8.03	8.00	8.09	8.03
Jul	8.11	8.09	8.20	0

COTTON 50,000; cents/lbs				
	Close	Previous	High/Low	
May	87.10	86.75	87.40	86.30
Jul	86.80	87.01	87.47	86.12
Oct	76.20	76.28	76.65	76.00
Dec	71.60	71.38	71.75	71.41
Mar	72.60	72.38	72.59	72.35
May	72.80	72.99	72.95	72.71
Jul	73.00	72.95	73.01	73.00

ORANGE JUICE 15,000 lbs; cents/lbs				
	Close	Previous	High/Low	
May	113.35	114.25	114.20	113.25
Jul	113.25	114.70	114.60	113.25
Sep	114.00	115.00	114.75	114.00
Nov	114.10	115.00	114.50	114.10

TEA

There was good general demand, reports the Tea Brokers' Association. Brightest and good medium teas showed some irregularity but were mostly fully firm to dearer. Plainer mediums were barely steady. Coloury Tanzanians and the better Central Africans attracted increased competition at firm to dearer rates. Ceylons met improved support and opened fully firm to 5p dearer although price levels weakened towards the close. Offshore teas proved a strong feature except for plainer Kenyas which were neglected. Quotations: Quality 275p nom, medium 114p, low medium 78p.

Chicago

SOYABEANS 5,000 bu min; cents/60lb bushel				
	Close	Previous	High/Low	
May	583/6	590/2	593/4	583/4
Jul	596/6	603/6	606/4	596/2
Aug	601/0	608/4	611/0	601/0
Sep	606/0	612/2	614/4	605/4
Nov	614/6	621/2	624/0	614/0
Jan	625/4	632/6	634/4	625/0
Mar	637/4	644/4	645/0	636/4
May	646/0	652/0	653/4	648/0
Jul	653/0	657/0	653/0	0

SOYABEAN OIL 60,000 lbs; cents/lb				
	Close	Previous	High/Low	
May	21.19	21.33	21.45	21.18
Jul	21.54	21.64	21.82	21.52
Aug	21.71	21.81	21.95	21.71
Sep	21.88	21.96	22.02	21.88
Oct	22.07	22.15	22.15	22.03
Dec	22.39	22.47	22.59	22.31
Jan	22.45	22.52	22.52	22.45
Mar	22.72	22.75	0	0

SOYABEAN MEAL 100 tons; $/ton				
	Close	Previous	High/Low	
May	171.9	173.8	175.8	171.7
Jul	175.2	177.2	179.2	175.1
Aug	176.5	178.7	180.7	176.5
Sep	178.1	180.1	181.8	178.1
Oct	179.2	181.1	182.5	179.2
Dec	182.2	183.8	186.2	182.2
Jan	182.5	184.0	184.5	182.5
Mar	1185.7	1187.5	0	0

MAIZE 5,000 bu min; cents/56lb bushel				
	Close	Previous	High/Low	
May	256/0	256/6	258/0	254/2
Jul	261/4	263/6	265/0	261/0
Sep	259/2	262/0	263/0	259/0
Dec	257/4	260/2	260/6	256/6
Mar	265/2	268/0	267/6	264/2
May	270/4	273/4	273/0	270/4
Jul	275/2	277/4	276/0	274/4

WHEAT 5,000 bu min; cents/60lb-bushel				
	Close	Previous	High/Low	
May	278/0	278/6	280/6	275/6
Jul	289/0	289/6	291/6	286/4
Sep	297/4	298/4	300/0	295/6
Dec	311/4	312/4	313/4	309/2
Mar	320/0	320/4	320/4	318/0
May	322/0	324/0	324/0	322/0

LIVE CATTLE 40,000 lbs; cents/lbs				
	Close	Previous	High/Low	
Apr	79.92	79.80	80.10	79.80
Jun	75.70	75.72	76.10	75.52
Aug	74.65	74.37	74.90	74.50
Oct	76.10	75.80	76.17	75.90
Dec	76.32	76.02	76.35	76.00
Feb	75.87	75.67	76.05	75.90
Apr	76.70	76.25	76.70	76.05

LIVE HOGS 30,000 lb; cents/lbs				
	Close	Previous	High/Low	
Apr	52.82	52.42	53.00	52.40
Jun	58.10	57.55	58.25	57.25
Jul	56.97	56.72	57.22	56.42
Aug	54.17	53.97	54.25	53.65
Oct	48.97	48.90	49.05	48.75
Dec	48.25	48.25	48.40	48.15
Feb	47.70	47.75	47.80	47.70
Apr	46.20	46.15	46.20	46.20

PORK BELLIES 40,000 lbs; cents/lb				
	Close	Previous	High/Low	
May	61.40	61.27	61.97	61.10
Jul	59.22	59.45	59.95	59.15
Aug	56.22	[illegible]	[illegible]	[illegible]
Feb	[illegible]	[illegible]	[illegible]	[illegible]
Mar	[illegible]	[illegible]	[illegible]	[illegible]

هكذا من الاصل

LONDON STOCK EXCHANGE

FT-SE 2,500 level lost in slow trade

UK stocks suffered another sharp reversal yesterday, falling nearly 30 points to close below the FT-SE 2,500 mark as investor optimism melted away on both sides of the Atlantic. Selling pressure remained fairly modest but buyers continued to avoid UK equities, believing that further cuts in UK interest rates may be delayed and that the domestic economy remains depressed.

The Footsie Index ended 29.3 down at 2,490.8, the low of the day and the first close below 2,500 since the beginning of the month. Concern over interest rates and economic uncertainties mirrored those in New York. London, already depressed by the fall of 34 Dow points in New York on Friday, fell sharply in late dealings yesterday as Wall Street recorded a loss of a further 32 Dow points early in the new session. Having failed to show much enthusiasm last week for Wall Street's successful, albeit brief, move above Dow 3,000, the UK market now seems to be reacting quickly to the fall in the US market.

Account Dealing Dates		
First Dealings:		
Apr 15	Apr 29	May 20
Option Declarations:		
Apr 25	May 16	May 30
Last Dealings:		
Apr 26	May 17	May 31
Account Day:		
May 7	May 28	Jun 10

*New-time dealings may take place from 9.30 am two business days earlier.

As often when the underlying equity market lacks certainty, share prices reacted to movements in the June futures contract on the FT-SE Index. In late trading, the futures contract turned down and led the underlying equity market below the 2,500 mark.

However, equity trading volumes were moderate in London yesterday, with Seaq recorded turnover at 403m shares, compared with 465m on Friday and as much as 700m shares daily during last month's bullish period. Low volume is disturbing for the securities industry; London Stock Exchange data shows that retail business fell to the £700m – £800m daily range last week, after running well above £1bn daily in March.

The latest Confederation of British Industries/Financial Times survey of distributive trades did little to change views on the underlying sluggishness of consumer business – an unexpected rise in high street sales appeared to reflect special factors, chiefly the sharp increase in Value Added Tax at the UK Budget in mid-March.

Today brings the UK trade figures for last month which equity market analysts predict will show little change from the £0.7bn monthly deficit recorded in February.

Wall Street's influence brought widespread falls in the blue chip internationals, where the dollar's strength proved no help to such US currency earners as BAT Industries and the pharmaceutical stocks. ICI, with first quarter trading figures due this week, fell smartly. With crude oil prices still unsettled and many analysts bearish, BP and the other leading oil producer shares could make little headway in yesterday's stock market.

The retail sector took the CBI/FT survey fairly well, and although there was little buying support across the broad range of the sector, there were a few firm spots. Ratners, the jewellery chain, brushed off disappointing results as investors continued to show faith that there will be a recovery in the economy, and thus in consumer confidence, by the end of the year. Kingfisher, the high street store group, managed one of the firm performances of the session.

Mr Neil Mackinnon, chief economist at Yamaichi, warned that the next shock for London and other global equity markets, could come on Friday when the first quarter gnp data for the US economy are published. "So far there is little evidence to support the official view of an early recovery in the (US) economy," said Mr Mackinnon.

Royals hit by rights talk

SUSTAINED weakness in Royal Insurance, the composite insurer, was accompanied by vague market suggestions that the group might be considering a rights issue. A cash call from Royal has been talked about for some time by a number of insurance specialists. Another suggestion is that analysts are preparing to downgrade their earnings and dividend forecasts for the company.

Some dealers, however, attributed the sharp fall in the shares, which settled 18 lower at 447p, to the fact that they had held up well against the rest of the sector during the first quarter.

There are suggestions that Royal's first-quarter results, due next month, could show a loss in excess of £60m. Analysts had been hoping that Royal might break even in the current year, but now some of them are looking for a full year loss of something in the order of £50m.

Gestetner weakens

Downgradings from competing broking houses put shares of Gestetner, the distributor of office equipment and photographic products, under pressure. Three analysts at least revised estimates of current year profits, the lowest of which until yesterday had been Smith New Court's £62m.

James Capel was said to have reduced its figure to £58m but more savage cuts came from BZW, and from another house which preferred to remain anonymous. Citing extremely poor trading throughout February and March, which will obviously affect group first-half profits, BZW dropped its estimate to only £50m for the full year. An even lower figure of £47m was said to have been forecast by another house.

BZW retained its longer term view of being overweight in the stock but sees short-term downside. Gestetner closed 20 down at 213p.

Hammerson good

The volatile property stock Hammerson was the best performer of the day among FT-SE 100 constituents in the wake of results announced last week.

County NatWest issued a buy note on the stock yesterday. It highlighted the company's cautious management policy and exposure to the dollar as reasons to buy. "The worst is certainly over, certainly in terms of sentiment." said County.

The company also made a presentation to its institutional shareholders at the offices of its broker BZW. More than 60 fund management staff attended.

Hammerson was 20 better at one point and the shares eventually closed at 630p for a gain of 15 on the day. Volume was a typical 350,000.

Ratners shines

Ratners, the jewellery retail chain, shrugged off disappointing final results as investors looked forward to the prospect of a recovery in consumer spending by the year-end. The shares closed 8 higher at 178p on turnover of 3m.

With nearly half of Ratners' UK profits made in the Christmas period, the market took heart from the confident statement by Mr Gerald Ratner, the chairman, who said he was hopeful for significantly better trading conditions during that important period.

Full year profits fell 8 per cent to £112m, slightly below market estimates. As a result, analysts lowered their current forecasts to around £127m to £130m from £130m to £135m.

It was the turn of cautious chemicals analysts to voice opinions on ICI and its first-quarter figures due on Thursday. The shares fell 21 to 1080p. Inchcape slipped 8 to 332p as the company reshuffled its board.

Volume in Saatchi & Saatchi climbed to 25m, but traders explained that more than 1¼bn Saatchi shares are in issue now that the rights offer is complete. As a result, it is one of the most liquid stocks in the market and this kind of trading volume is to be expected. The share price ended unchanged at 1¼p.

Weekend reports that ADT might sell its stake in Christies International left the latter 8 off at 218p. Volatile Brent Walker slid 6 to 66p in the wake of press comment on the company.

The wider market reaction combined with a downgrading by Lehman Brothers, the securities house, pushed Trafalgar House down 9 to 245p in heavier trading volume of 2.7m shares.

Official confirmation of weekend reports that Guinness Mahon, the UK merchant bank, will announce a substantial interim loss later this week prompted a near 20 per cent drop in the bank's shares. They closed a net 8 lower at 42p.

Mr Geoffrey Bell, the bank's chairman, said the results would include a provision of £30m for bad loans, giving the bank an after tax loss of £35m. There will be no dividend, Mr Bell added.

Bank of Yokohama, Japan's leading regional bank, gained control of Guinness Mahon in 1989, paying 146p a share, and holds a 65 per cent stake. Mr Robert Maxwell has a 9 per cent holding.

Oil shares were resilient, closing little changed on balance in spite of the steep falls in equities on both sides of the Atlantic. They were bolstered, dealers said, by the latest rise in crude oil prices, currently around the $20 a barrel mark, and the strength of the dollar. "With oil priced in dollars the majors are 100 per cent exposed to the currency," said one specialist.

There were hints that Elf's advisers had priced Elf's 25 per cent holding in Enterprise Oil prior to its imminent placing, but specialists said it was more likely that Elf would hold out for a price in the region of 600p before it would sell. Enterprise were easier at 555p.

Cadbury Schweppes fell 11 to 395p on a revival of speculation about a possible rights issue. Asda was off 1½ at 119½p as the market waited for the company's meeting with brokers, to be held later this week. The shares have been depressed on speculation that analysts' forecasts may be reduced. Budgens put on 2 to 47p after reports that some shareholders are seeking senior management changes.

Relief that the annual profits shortfall over the previous year was not worse boosted issues of Polymark International, the laundry equipment distributor. The ordinary shares advanced 8 to 28p and the preferred "A" 17 to 115p.

Renewed speculative interest was held responsible for further strength in USM-listed M.L. Laboratories, which finished 18 higher at 455p.

There were further setbacks in a water sector still suffering from last week's news that trading in the Water Package is to cease from July 12. Dealers maintained that this will result in sustained selling of the Package, with funds unwilling to be left with thinly traded components of each package unit.

Much of the recent selling has come from overseas investors, it was said, with Japanese institutions conspicuous and heavy sellers. Also depressing sentiment has been unease about the UK government's chances of winning the next general election. The opposition Labour party has recently reaffirmed its intention to renationalise the water companies if it wins the election.

The Package was down over £100 at one point yesterday, but rallied to close a net £42 off at £2968. Anglian Water weakened 10 to 286p, while Southern dipped 8 to 270p and Severn Trent the same amount to 280p. North West drew sustained support, closing unchanged at 296p after 291p.

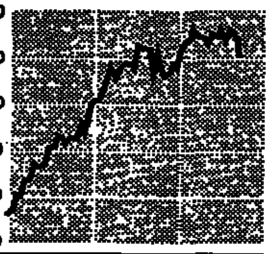
Cronite returned from suspension with a reassuring directors' statement, and the shares closed at 24p, double the April 5 suspension price.

Further speculation that the UK Ministry of Defence will shortly award its much-mooted replacement tank contract to Vickers failed to support the shares, which fell 7 to 218p. Vickers manufactures the Challenger tank, a new and more sophisticated version of its old Chieftain series.

Downiebrae, the Glasgow-based steel profile and pipe flange manufacturer, found favour ahead of Friday's annual results and ended 7 higher at 36p.

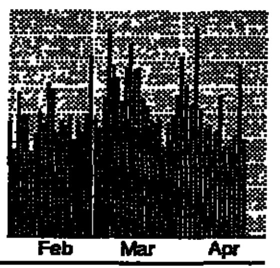
■ Other Market statistics, including the FT-Actuaries share index, Page 25

FT-A All-Share Index



Equity Shares Traded

Turnover by volume (million)
Excluding:
Intra-market business & Overseas turnover



NEW HIGHS AND LOWS FOR 1991

NEW HIGHS (135).
AMERICANS (30) Am. Cyanamid, Amer. T &T, BankAmerica, Bowater, Brunswick, CPC, California Energy, Cont'l. Bank, Control Data, Dana, Data Genl., Dun & Bradstreet, Eaton, Ford Motor, Gen. Elect., Greyhound Dial, Houston Inds., NYNEX, Pall, Penn. Rep. NY, Sears Roebuck, Sun Co, TRW, Tenneco, Time Warner, USX, Unilab, Unocal, Whirlpool, CANADIANS (12) BC Gas, Montreal, Bk. Nova Scot., Brascan, Can. Imp. Bk., Central Capital A, Dorian In., Hawker Sid. Can., Hudson's Bay, Inco, Nova Corp of Alberta, Royal Bk. Can., Toronto Dom. Bk., BANKS (2) Espirito Santo, Westpac, BREWERS (3) Fuller, Greene King, ..., BUILDINGS (8) Amco, Boot (Henry), BMW, SWP, Smart (J), Ward, CHEMICALS (2) Caird, Rd Pl., Engelhard, Jeyes, STORES (9) Alexon, Amber Day, Cantors A, Ell..., Gabicci, Helene, Hogg Robinson, ... Wise, Pepe, QS, Scholl, Sherwood, ELECTRICALS (11) Black & Decker, CML Micro., Forward Tech., Fujitsu, Hewlett-Packard, Kewill Syst., Lynmouth & Burchett, Nth. Telecom, Plessey A, TDK, ENGINEERING (2) ASW, Downiebrae, FOODS (8) Assoc. Fisheries, Bensons Crisps, Brake Bros., Goodman Fielder Wattie, Morrison (Wm) 5¼pc Pf., N & W, Nichols (Vimto), Sutherland, INDUSTRIALS (30) Amer. Bus. Systems, BH Prop., Betterware, Bluebird Toys, Bowater, Bridon, Brierley Invs., BTR Nylex, CSR, Dauphin, Dolphin Pack., Elys, Erskine Hse. 7¼pc Pf., Fabe..., Grampian Hldgs., Intereurop, Le Creuset, Low & Bonar, ML Labs., M..., Pacific Dunlop, Petterson Zoch A, ..., Polymark, Do. Pfd. A, Powell Duffryn, Schlumberger, Swallowfield, Whatman, INSURANCE (8) Amer. Gen., Aon, Lincoln Nat., Travelers, USF & G, LEISURE (4) Central ITV, Hi-Tec, Invicta Sound, Pickwick, MOTORS (3) Appleyard, Dagenham, Perry, NEWSPAPERS (2) Johnston Press, News Corp., PAPERS (4) Abbott Mead V., Lawson Mardon, TMD Advertising, Waddington (J), PROPERTY (8) Cap. & Counties, Land Lease, Marylebone Ests., Slough Est. 8pc Bd. 2003, Town Centre, SHOES (1) FII, SOUTH AFRICANS (3) OK Bazaars, SA Brews., Tongaat-Hulett, TRANSPORT (4) CSX, Dawsongroup, Mayne Nickless, Tibbett & Britten, TRUSTS (30) Acorn, American Tst., BWD, Baring Puma Fd., Cons. Venture, Edinburgh Fd. Man., Exmoor Dual Inc., Fidelity Japan OTC & Reg. Fd., Fleming Amer., Fleming Fledgeling, GT Chile Fd. Units, Genesis Chile Fd., Genesis Emrg. Mkts., Genesis Malaysia Maju. Fd., Haw Paw Bros., Intrum Justitia, Jakarta Fd., Latin Amer., London Amer. Vent., Malacca Fd., Malaysia Cap. Select, Malaysian Emrg. Co's. Fd., Do. Wrrnts., Moorgate, River & Merc. Am. Inc., Scot. Nat. Zero Div. Pf., Singapore SESDAQ Fd., South East Asian Fd. Wrrnts., Thai Euro Fd., Tor., OILS (8) Chevron, Exxon, Hamilton Oil, Mobil, NZ Oil & Gas, Woodside, MINES (11) Ang. Am. Coal, Beatrix, De Beers Linked Units, Doornfontein, East Daggafontein, Elsburg, Gencor, Impala Plat., Northam Plat., Rustenburg Plat., Western Areas.
NEW LOWS (25).
BANKS (2) Guinness Mahon, HSBC, STORES (3) Asprey, Oliver, Usher (Frank), ELECTRICALS (1) Sema, ENGINEERING (1) Bailey (C.H.), FOODS (1) Albert Fisher, INDUSTRIALS (6) African Lakes, Brompton, Courtney Pope, Kingsgrange, Ross, Scot. Heritable Tst., NEWSPAPERS (1) Gardner (DC), PROPERTY (5) Clayform Wrrnts., English & O'seas, Rosehaugh, Stanhope, Wates City of London, TRUSTS (2) Sumit, Worth, OILS (2) Clyde Petm., Tullow, XCL Sunrise, MINES (3) East Rand Prop., Harmony, Winkelhaak.

FINANCIAL TIMES STOCK INDICES

	Apr 22	Apr 19	Apr 18	Apr 17	Apr 16	Year Ago	1991 High	1991 Low	Since Compilation High	Since Compilation Low
Government Secs	84.84	84.84	84.82	84.92	85.07	75.34	85.88 (19/2)	82.17 (2/1)	127.4 (9/1/35)	49.18 (3/1/75)
Fixed Interest	94.34	94.62	94.61	94.66	94.67	84.89	94.84 (5/4)	90.59 (2/1)	105.4 (28/11/47)	50.53 (3/1/75)
Ordinary Share ●	1954.4	1980.1	1996.4	2001.4	1985.5	1692.7	2014.5 (5/4)	1606.3 (16/1)	2014.5 (5/4/91)	49.4 (26/6/40)
Gold Mines	142.5	140.2	139.4	139.0	138.4	245.2	179.7 (14/1)	127.0 (22/2)	734.7 (15/2/83)	43.5 (26/10/71)
FT-SE 100 Share	2490.8	2520.1	2538.4	2545.0	2519.5	2159.2	2545.3 (5/4)	2054.8 (16/1)	2545.3 (5/4/91)	986.9 (23/7/84)
FT-SE Eurotrack 200	1156.13	1167.51	1173.06	1172.46	1161.90	-	1176.39 (16/4)	936.62 (16/1)	1176.39 (16/4/91)	936.62 (16/1/91)
●Ord. Div. Yield	4.93	4.86	4.82	4.82	4.86	5.36				
●Earning Yld %(full)	8.84	8.72	8.71	8.70	8.86	12.05				
●P/E Ratio(Net)(☆)	13.89	14.08	14.10	14.12	13.88	10.07				
SEAQ Bargns 4.45pm	27,743	28,283	32,386	28,692	30,305	20,238				
Equity Turnover(£m)†	-	833.47	1221.63	946.56	805.87	652.33				
Equity Bargains†	-	28,287	32,934	29,166	30,948	19,850				
Shares Traded (ml)†	-	395.5	690.3	403.8	363.3	357.8				

Basis 100 Govt. Secs 15/10/26, Fixed Int. 1928, Ordinary 1/7/35, Gold mines 12/9/55. Basis 1000 FT-SE 100 31/12/83 & FT-SE Eurotrack 200 26/10/90. ☆ Nil 13.37

Ordinary Share Index, Hourly changes Day's High 1971.1 Day's Low 1954.4

Open	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm
1970.8	1967.2	1970.5	1966.1	1961.6	1964.1	1964.7	1965.3	1957.4

FT-SE 100, Hourly changes Day's High 2509.3 Day's Low 2490.8

Open	9 am	10 am	11 am	12 pm	1 pm	2 pm	3 pm	4 pm
2507.5	2503.9	2509.0	2501.0	2497.2	2500.3	2501.3	2502.7	2494.4

FT-SE Eurotrack 200, Hourly changes Day's High 1161.40 Day's Low 1155.89

Open	10 am	11 am	12 pm	1 pm	2 pm	3 pm
1160.54	1160.96	1158.11	1156.57	N/A	N/A	1159.62

GILT EDGED ACTIVITY

Indices*	Apr 19	Apr 18
Gilt Edged Bargains	84.9	91.1
5 – Day average	89.0	92.7

*SE Activity 1974.
†Excluding intra-market business & Overseas turnover.

London report and latest Share Index: Tel. 0898 123001

TRADING VOLUME IN MAJOR STOCKS

	Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change		Volume 000's	Closing Price	Day's change
ADT	3,600	91	+1½	Dalgety	539	367		Manpower	549	72	−½	Slough Ests	195	249	−3
ASDA Group	3,500	119½	−1½	De La Rue	169	583	−6	Manweb	169	235	−1	Smith (W.H.) A	57	378	−4
Abbey National	1,100	275	−3	Dixons	541	191	−1	Marks & Spencer	3,200	257		Smith & Nephew	5,000	121½	−3½
Albert Fisher	1,800	114	−1	ECC Group	389	426	−4	Maxwell Comms.	1,800	221	−7	SmKl Beecham	1,800	832	−14
Allied-Lyons	793	525	−10	Eastern Elect.	1,500	189	−1	Midland Bank	289	221	−1	SmKl Beecham Uts.	228	3680	−60
Amstrad	1,600	73	−1½	East Midland Elect.	1,400	198	−3	Midlands Elect.	414	198	−3	Smiths Inds.	884	270	−1
Anglian Water	1,700	286	−10	Enterprise Oil	241	555	−1	NatWest Bank	2,200	328	−5	Southern Elect.	662	201	
Argos	120	296	−7	Eurotunnel Units	68	461	−1	National Power	5,600	129½	−4	South Wales Elect.	37	230	−1
Argyll Group	3,000	306	−9	FKI	2,700	57		Next	341	25½		South West Water	1,100	294	+1
Ass. Brit. Foods	21	509	+1	Ferranti	394	15	−1	North West Water	1,000	296		South West. Elect.	278	208	−1
BAA	1,200	422	−5	Fisons	2,300	474	−12	Northern Elect.	469	201	−5	Southern Water	847	270	−8
BAT Inds.	1,400	686	−9	Gen. Accident	802	597	−7	Northern Foods	802	443	−1	Standard Chartd.	175	381	−5
BET	1,000	180	−5	General Elect.	4,100	189	−3	Norweb	90	202	−5	Storehouse	1,100	117	
BICC	1,200	418	−12	Glaxo	1,400	1072	−5	Pearson	172	725	−9	Sun Alliance	535	380	−8
BOC	364	671	−10	Glynwed Int.	185	286	−2	P & O	1,300	698	−13	T&N	22	178	−1
BPB Inds.	145	228	−2	Granada	57	194	−1	Pilkington	1,800	191	−6	TI Group	457	529	−6
BTR	2,700	384	−4	Grand Met.	1,100	786	−11	PowerGen	4,300	129½	−4	TSB	1,300	152	−1
Bank of Scotland	191	139	−1	GUS A	422	1206	−17	Prudential	2,700	229	−9	Tarmac	1,700	245	
Barclays	2,200	459	+1	GRE	639	208	−2	RHM	757	318	−3	Tate & Lyle	1,000	348	−7
Bass	545	954	−15	GKN	1,200	371	−4	RMC	171	650	−14	Taylor Woodrow	1,200	233	−1
Beazer	592	181	−2	Guinness	654	902	−6	RTZ	697	543		Tesco	2,100	274	−8
Berisford Int.	1,700	37	−1	Hammerson 'A'	375	630	+15	Racal	4,600	233	−5	Thames Water	1,300	302	−4
Blue Circle	905	245	−4	Hanson	7,700	224	−2	Racal Telecom	381	360	−14	Thorn EMI	315	716	−7
Boots	497	371	−4	Hanson Warrants	258	39½	−2½	Rank Org.	625	736	−2	Trafalgar House	2,700	245	−9
Bowater	372	640	−5½	Harrisons Crosfield	45	169	−2	Reckitt & Colman	109	1059	−1	Trusthouse Forte	1,000	286	
Brit. Aerospace	992	614	−10	Hawker Sidd.	213	571	−6	Redland	598	573	−15	Ultramar	397	327	−2
British Airways	1,900	160	+2	Hillsdown	935	280		Reed Intl.	1,700	436	−7	Unigate	547	389	−6
British Gas	4,600	252	−1	IMI	85	258	−1	Reg. Elect. Pkg Uts	5	£2020	−36	Unilever	392	789	−7
British Land	382	385	−5	ICI	1,500	1080	−21	Rentokil	37	270		United Biscuits	609	381	−4
BP	3,400	349	−1½	Inchcape	585	332	−8	Reuters	694	870	−8	Utd. Newspapers	637	372	−7
British Steel	3,000	137½	−1½	Kingfisher	585	480	+1	Rolls Royce	3,500	172	−2	Water Package Uts.	3	£2968	−42
British Telecom	5,200	355	−6	Ladbroke	658	275	−2	Rothmans	188	[illegible]	−7	Wellcome	780	830	−5
Bunzl	533	93	−2	Land Securities	570	531	−5	Ryl Bk Scotland	1,800	198	−1	Welsh Water	1,100	324	−7
Burmah Castrol	281	573	−12	Laporte	25	574	−8	Royal Insurance	1,000	447	−18	Wessex Water	871	384	−3
Burton	211	95		Legal & General	369	441	−11	Saatchi	25,000	1¼		Whitbread 'A'	1,000	480	−4
Cable & Wire.	789	536	−6	Lloyds Abbey	1,100	432	−4	Sainsbury	2,200	383	−7	Wiggins Teape	1,700	225	−5
Cadburys	1,800	395	−11	Lloyds Bank	678	343	−6	Scottish & New.	1,800	372	−2	Williams Hldgs.	2,800	282	−2
Calor Group	121	238		LASMO	478	358	−1	Sears	1,300	90	−1	Willis Corroon	1,100	320	−8
Carlton Comms.	354	445	−14	London Elect.	1,100	198	−4	Sedgwick	290	284		Wimpey	489	214	+1
Coats Viyella	308	139	−4	Lonrho	1,700	289	−3	Seaboard	105	194	−5	Yorkshire Elect.	892	214	−3
Comm. Union	491	514	−4	Lucas	1,000	162	−3	Severn Trent Water	2,100	280	−7	Yorkshire Water	886	318	−2
Cookson	324	129	−4	MB Caradon	180	220	−5	Shell Transport	2,200	513					
Courtaulds	574	386	−3	MEPC	500	525	−6	Siebe	197	423	−4				

Based on the trading volume for a selection of Alpha securities dealt through the SEAQ system yesterday until 4.30pm.

EQUITY FUTURES AND OPTIONS TRADING

THE HINT of a weak performance on Wall Street sent UK stock index futures scurrying lower yesterday and dragged the share market down in its wake.

A dearth of buyers initially left the London market vulnerable to profit-taking. It then only took suggestions of a decline on Wall Street to send equity futures still lower.

Brokers said the lack of buying made it difficult to execute even the small number of institutional sell orders placed with them. Instead, turnover was dominated by market professionals and securities houses.

There was also interest in FT-SE 100 index options, with some investors short of futures buying April calls and others buying puts and selling calls, all of which are deals that assume the equity market will weaken further.

The June FT-SE futures contract traded for much of the session just 20 points above the spot index, compared with the 30-point premium brokers estimate is necessary to take account of future dividend payments and financing cost.

June FT-SE closed at 2,511, down 33 points on the day and 17 points above the spot index.

Hanson August 220 and 240 calls were actively traded as investors in the recent Eurobond issue continued to sell calls as a hedging trade against the bonds.

GEC August 200 puts were a busy contract as a large technical trade was executed.

LONDON SHARE SERVICE

BRITISH FUNDS

1991 High	1991 Low	Stock	Price £	+ or −	Yield Int.	Yield Red.
		"Shorts" (Lives up to Five Years)				
99⅝	98⅓	Treas 10pc Cv '91 ‡‡	99⅝		10.04	10.48
99⅞	99⅜	Exch. 11pc 1991	99¾		11.01	11.24
98⅛	96⅝	Treas. 8pc 1991	98⅛		8.1	
101⅛	100	Treas 12¾pc 1992‡‡	101⅛		12.5	
99⅞	97	Treas 10pc 1992	99¼		10.0	
97½	95	Treas. 8pc 1992 ‡‡	97½		8.2	
99⅞	98	Treas 10½pc Cv 1992‡‡	99⅜		10.5	
[illegible]						

BRITISH FUNDS – Contd

1991 High	1991 Low	Stock	Price £	+ or −	Yield Int.	Yield Red.
98⅝	92	Treas 9¾pc 2002	96¾		10.08	10.25
100	94	Treas 10pc 2003	98½	−¼	10.15	10.21
108¾	102	Treas. 11½pc 2001-04	106¼	−⅛	10.82	10.45
58	53	Funding 3½pc '99-04	57⅝		6.07	9.08
97	90	Conversion 9½pc 2004	95	−¼	9.99	10.17
[illegible]						

Over Fifteen Years

Undated

Index-Linked

INT. BANK AND O'SEAS

1991 High	1991 Low	Stock	Price £	+ or −	Yield Int.	Yield Red.
102	95⅞	African Dv Bk 11¼Ln 2010	100	−⅛	11.12	11.09
97	91	Asian Dev Bk 10¼pcLn2009	95½	−½	10.75	11.76
112	105	Int-Am Dev Bk 12½pc2003	110	+¼	11.32	10.90
92	86	Do. 9¾pcLn 2015	90		10.73	10.82
117	101	Utd. Mexican States 16½pc 2008	117		14.10	13.87

CORPORATION LOANS

COMMONWEALTH & AFRICAN LOANS

LOANS

Building Societies

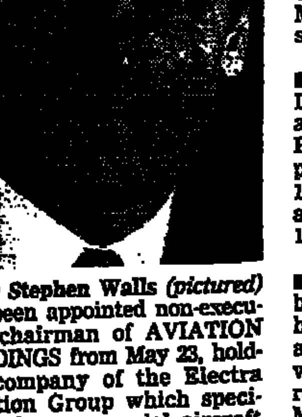
Public Board and Ind.

FOREIGN BONDS & RAILS

Continued on next page

APPOINTMENTS

Chairman of Aviation Holdings



■ Mr Stephen Walls *(pictured)* has been appointed non-executive chairman of AVIATION HOLDINGS from May 23, holding company of the Electra Aviation Group which specialises in commercial aircraft leasing. He is chief executive of Wiggins Teape Appleton, and was previously group managing director of The Plessey Company.

■ CANNON STREET INVESTMENTS has appointed Mr John Maclean as a non-executive director.

■ LAURENTIAN FUND MANAGEMENT, investment arm of Laurentian Financial Group, has appointed Mr Nigel Quinnen as director of UK equities. He was head of UK equities at Lazards.

■ Mr Patrick Hall, an equity partner and director of Mason Philips since 1980, will be joining the board of GREAT PORTLAND ESTATES as an executive director from August 12.

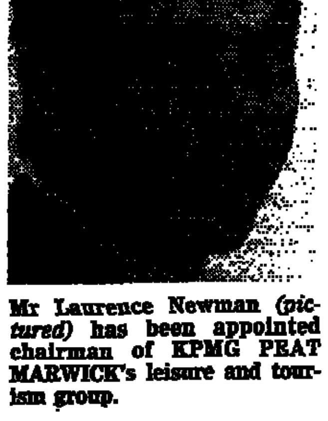
■ Mr Andrew Hindmarsh has been appointed director and general manager of R.J.L. FINANCE, of Stretford, Manchester, personal loans subsidiary of Refuge Group.

■ CAMERON IRON WORKS, Livingston, West Lothian, has appointed Mr Derek Graham Pattie as director, forged products division, from May 1. He was operations director and joined the company in 1962.

■ Mr Stephen Hannah has been appointed a director and head of fixed income research at IBJ INTERNATIONAL. He was a director and head of research with NatWest Capital Markets.

■ Sir Robert Clark and Mr Alan Clements have been appointed non-executive directors of MIRROR GROUP NEWSPAPERS in preparation for its flotation. Sir Robert recently retired from TSB Group where he was deputy chairman. He is a non-executive director of Shell Transport and Trading Co, SmithKline Beecham and Racal Telecom. Mr Clements recently retired from ICI where he was finance director. He is non-executive chairman of David S. Smith Holdings, and a non-executive director of Trafalgar House, Granada Group, The Brent Walker Group, and Guinness Mahon Holdings.

■ HERON INTERNATIONAL has appointed Mr Mike Gilhooley as a director of Heron Garage Properties, which acquires petrol station sites for the group. He was retail investments manager.



Mr Laurence Newman *(pictured)* has been appointed chairman of KPMG PEAT MARWICK's leisure and tourism group.

■ *Mr Martin Lister* has become a director of GRE Asset Management, GUARDIAN ROYAL EXCHANGE's investment arm. He was an assistant director.

■ Sir Victor Garland has been appointed a non-executive director of RATNERS GROUP. He is a non-executive director of the Prudential Corporation, and a director of several investment trusts. Mr John Hughes has resigned from the main board but continues as director of group retail operations.

■ Mr Desmond Taljaard has been appointed financial director of LADBROKE GROUP PROPERTIES. He was a senior manager, property and construction group, at Ernst & Young.

■ D.G. DURHAM GROUP has appointed Mr Peter Riddell to the board. He continues as chairman of Durham Hadley Cannon, the group's Lloyd's broking subsidiary, of which Mr Nicholas Morgan becomes managing director. Mr Morgan was managing director, wholesale division.

■ KLEINWORT BENSON has appointed Mr Ben Siddons as managing director of Kleinwort Benson Investment Trust Management of which he is a director, and manager, The Merchants Trust.

■ AT&T ISTEL has appointed Mr Patrick Gaul as business development director. He was with AT&T in Japan as director of international market development. Mr John Maher has been appointed business development manager with the Rover division. He was business operations manager with Extel Financial.

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AMERICANS

1991 High	Low	Stock	Price £	+ or –	Div Gross	C'vr	Y'ld Gr's
30¼	20¾	Abbott Laboratories	29⅞	–⅛	$1.00	–	1.9
363p	257p	Allegheny & W 1c	292p	–16	30c	–	5.7
972p	667p	Amdahl 5c	963p	–9	10c	–	0.6
33¾	25¼	Amer. Cyanamid $5	33¾	+1¼	$1.50	–	2.5
17¼	9⅝	Amer. Express 60c	16½	–¼	92c	–	3.1
21½	15¼	American T. & T. $1	21½	+⅛	$1.32	–	3.4
38¼	32½	Ameritech $1	37¾	+1¼	$3.16	–	4.7
275p	167p	Asiamerica Equities	259p	+4	–	–	–
22⅝	12⅜	BankAmerica $1	22⅜	+⅜	$1.20	–	3.0
28¼	20⅝	Bankers N.Y. $1	28½	–⅛	$1.52	–	9.5
29⅛	24¼	Bell Atlantic $1	28¼	+¼	$2.36	–	4.6
30¼	25	BellSouth Corp	30⅛	+1¼	$2.68	–	5.0
8½	6⅞	Bethlehem Steel $8	8⅛	.....	40c	–	2.6
1525p	1046p	Bowater Inc	1525p	+46	$1.20	–	4.4
8⅛	4½	Brunswick 75c	8⅛	+⅛	44c	–	2.9
50¼	37⅜	CPC Intnl. 25c	50¼	+⅛	$2.00	–	2.2
839p	420p	California Engy	839p	+14	–	–	–
49⅞	28¼	Campbell Soup 15c	49¼	–⅜	$1.16	–	1.3
11⅞	5⅞	Chase Manhattan $12½	11⅞	–⅛	$1.20	–	5.9
8⅛	5⅛	Chrysler $6¼	8⅛	+⅛	60c	–	3.9
9⅜	5⅞	Citicorp $1	9⅜	–⅛	$1.00	–	6.1
48½	34⅜	Colgate-Palmolive $1	48⅜	–⅛	$2.12	–	2.5
795p	436p	Cont'l Bank Corp $4	795p	+35	$1.00	–	7.0
[illegible]							

CANADIANS

[illegible]

BANKS, HP & LEASING

[illegible]

Hire Purchase, Leasing, etc.

[illegible]

BEERS, WINES & SPIRITS

[illegible]

BUILDING, TIMBER, ROADS

[illegible]

BUILDING, TIMBER, ROADS – Contd

[illegible]

CHEMICALS, PLASTICS

[illegible]

DRAPERY AND STORES

[illegible]

DRAPERY AND STORES – Contd

[illegible]

ELECTRICALS

[illegible]

ELECTRICITY

[illegible]

ENGINEERING

[illegible]

FOOD, GROCERIES, ETC

[illegible]

HOTELS AND CATERERS

[illegible]

INDUSTRIALS (Miscel.)

[illegible]

INDUSTRIALS (Miscel.) – Contd

[illegible]

INDUSTRIALS (Miscel.) – Contd.

[illegible]

INSURANCES

[illegible]

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LEISURE

MOTORS, AIRCRAFT TRADES

Commercial Vehicles

Components

Garages and Distributors

NEWSPAPERS, PUBLISHERS

PAPER, PRINTING, ADVERTISING

PROPERTY

SHOES AND LEATHER

SOUTH AFRICANS

TEXTILES

TOBACCOS

TRANSPORT

TRANSPORT—Contd

INVESTMENT TRUST

INVESTMENT TRUST—Contd

Net asset values supplied by County NatWest Wood Mackenzie

FINANCE, LAND, ETC

WATER

OIL AND GAS

PLANTATIONS

Rubbers, Palm Oil

Teas

MINES

Central Rand

Eastern Rand

Far West Rand

O.F.S.

Diamond and Platinum

Central African

Finance

Australians

MINES—Contd

Tins

Miscellaneous

£10¼	£7½	Homestake Mining $1.	£8¼	...	Q20c	1.3
59	30	Iverna West. ...y	57	+1		
46	36	Kells Mins Ir5p y	38			
25	9	Kenmare ...y	18	+½		
17	15	Navan Resources y	15			
13	7	New Sabina Res C$1.	10			
99	52	Northgate Expl. C$1..	72	+2		
16	10	North West Expl......	12			
11	2¼	Nor-Quest Res	9½			
122	82	Oryx Gold Hldgs.......	92	+2		
23	11	Ovoca Gold IR 2p.. y	21	+1		
44	38	Plateau Mining 20p... β	39			
573	404	RTZ 10p..... ......α	543	...	19.5 q2.1	4.8
10	3¼	Thorco Res. Inc.1...	7½			
10	7	Vizcaya Hldgs 5p ..β	7			
133	120	Young Group 10p.. β	125		5.2	5.5

NOTES

Stock Exchange dealing classifications are indicated to the right of security names: α Alpha refers to shares traded through SEAQ by at least two marketmakers and with a normal market size of 2,000 or more, based on experience of how many of its shares are traded in the typical deal. β Beta refers to all other shares. γ Gamma refers to other traded instruments.

Highs and lows are based on intra-day mid prices. Unless otherwise indicated, prices and net dividends are in pence and denominations are 25p. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated on half-yearly figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation and unrelieved ACT where applicable; bracketed figures indicate 10 per cent or more difference if calculated on "nil" distribution. Covers are based on "maximum" distribution; this compares gross dividend costs to profit after taxation, excluding exceptional profits/losses but including estimated extent of offsettable ACT. Yields are based on middle prices, are gross, adjusted to ACT of 25 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current pre-closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- ● "Tap Stock"
- * Highs and lows marked thus have been adjusted to allow for rights issues for cash
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ‡‡ Tax-free to non-residents on application
- ● Figures or report awaited
- ♥ Not officially UK listed; dealings permitted under rule 535(4)(a)
- ♣ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- ‡‡ Not officially listed.
- # Price at time of suspension
- ¶ Indicated dividend after pending scrip and/or rights issue; cover relates to previous dividend or forecast.
- ♦ Merger bid or reorganisation in progress
- ♦ Not comparable
- ♦ Same interim; reduced final and/or reduced earnings indicated
- § Forecast dividend; cover based on earnings updated by latest interim statement.
- ‡ Cover allows for conversion of shares not now ranking for dividends or ranking only for restricted dividend.
- ☆ Cover does not allow for shares which may also rank for dividend at a future date. No P/E usually provided.
- ‖ No par value

B.Fr. Belgian Francs. Fr. French Francs ββ Yield based on assumption Treasury Bill Rate stays unchanged until maturity of stock. a Annualised dividend. b Figures based on prospectus or other official estimates. c Cents. d Dividend rate paid or payable on part of capital, cover based on dividend on full capital. e Redemption yield. f Flat yield. g Assumed dividend and yield. h Assumed dividend and yield after scrip issue. j Payment from capital sources. k Kenya. m Interim higher than previous total. n Rights issue pending q Earnings based on preliminary figures. s Dividend and yield exclude a special payment. t Indicated dividend: cover relates to previous dividend, P/E ratio based on latest annual earnings. u Forecast, or estimated annualised dividend rate, cover based on previous year's earnings. v Subject to local tax. x Dividend cover in excess of 100 times. y Dividend and yield based on merger terms. z Dividend and yield include a special payment: Cover does not apply to special payment. A Net dividend and yield. B Preference dividend passed or deferred. C Canadian. E Minimum tender price. F Dividend and yield based on prospectus or other official estimates for 1990-91. G Assumed dividend and yield after pending scrip and/or rights issue. H Dividend and yield based on prospectus or other official estimates for 1991. K Dividend and yield based on prospectus or other official estimates for 1990. L Estimated annualised dividend, cover and P/E based on latest annual earnings. M Dividend and yield based on prospectus or other official estimates for 1991-92. N Dividend and yield based on prospectus or other official estimates for 1989-90. P Figures based on prospectus or other official estimates for 1991. Q Gross. R Forecast annualised dividend, cover and p/e based on prospectus or other official estimates. T Figures assumed. W Pro forma figures. Z Dividend total to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xd ex capital distribution.

REGIONAL & IRISH STOCKS

The following is a selection of Regional and Irish stocks, the latter being quoted in Irish currency.

Craig & Rose £1.. β	650	......
Finlay Pkg 5p.... β	30	......
Holt (Jos) 25p.....β	1600	......
Heiton Hldgs.......γ	40	-3
IRG......................	155	......
United Drug..........	160	-10

IRISH

Cap. 8½% Ln. 1991...	£99¼	+⅛
9pc Cap Ln. 1996..	£98½	......
Fin. 13% 97/02...	£115	......
Arnotts.	160	......

TRADITIONAL OPTIONS

3-month call rates

Industrials

	p
Allied-Lyons	46
Amstrad	7
Astec (BSR)	6
BAT	60
BOC Grp	31
BTR	33
Barclays	30
Blue Circle	24
Boots	30
Bowaters	53
Brit Aerospace	56
British Steel	12
Brit. Telecom	29
Cadburys	33
Charter Cons	45
Comm Union	44
Courtaulds	32
Eurotunnel	58
FKI	6
FNFC	20
Gen Accident	48
GEC	17
Glaxo	80
Grand Met	62
Guardian	19
GKN	31
Hanson	19
Hawker Sidd	39
ICI	80
Ladbroke	22
Legal & Gen	36
Lex Service	20
Lloyds Bank	30
Lucas Inds	13
Marks & Spencer	22
Midland Bk	18
Nat West Bk	27
P & O Dfd	31
Racal Elect	18
RHM	28
Rank Org Ord	63
Ratners	17
Reed Intel	36
Sears	8½
SmKl. Beecham A	58
TI	45
TSB	12
Tesco	21
Thorn EMI	64
Trust Houses	25
T&N	15
Unilever	60
Vickers	19
Wellcome	40

Property

Brit Land	38
Control Secs	3
Land Securities	45
MEPC	48
Mountleigh	8½

Oils

Aviva Petlm	3
Brit Petroleum	28
Burmah Castrol	49
Conroy Petlm	10
Gaelic Res	1
Premier	6
Shell	41
Tuskar Res	2
Ultramar	30

Mines

Lonrho	21
RTZ	48

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1,150 a year for each security shown, subject to the Editor's discretion.

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AUTHORISED UNIT TRUSTS

	Init Charge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
Abbey Unit Tst Mngrs (1000)H						
80 Holdenhurst Rd, Bournemouth 0345 717373						
High Income						
American Income	6	49.04	49.04xd	52.44	+0.31	6.62
Gilts & Fixed Int	6	112.7	112.7xd	119.5	+0.1	9.62
High Inc Equity	6	137.1	140.6xd	149.5	-0.6	5.69
Worldwide Bond	6	206.4	206.4xd	218.7	+0.2	6.86
Capital Growth						
American Growth	6	201.4	201.4	215.4	+0.5	1.22
Asian Pacific	6	128.3	131.0	139.3	+0.8	.14
Assets & Earnings	6	177.1	180.7	192.2	-1.0	2.88
Capital Reserve Acc	0	104.0	104.0	104.1	-	7.29
Capital Reserve Inc	0	82.26	82.26xd	82.29	+0.01	7.29
Comdty & Energy	6	77.82	77.82xd	83.22	+0.11	.90
1992 Enterprise	6	64.61	64.61	69.10	-0.22	3.14
Euro Capital Acc	6	87.39	87.39	93.46	-0.30	1.45
Euro Capital Inc	6	83.49	83.49xd	89.29	-0.29	1.46
General	6	172.6	172.6xd	184.5	-1.2	2.71
Japan	6	103.2	103.2	110.3	+0.1	-
Mastertrust	6	90.14	90.14	96.40	+0.08	2.19
UK Growth Acc	6	162.2	162.2	173.4	-0.5	2.14
UK Growth Dist	6	104.2	104.2xd	111.4	-0.3	2.15
US Emerging Cos	6	66.01	66.01	70.59	+0.17	-
Income & Growth	6	312.4	312.4	334.1	-1.5	4.19
Ethical	6	50.77	50.77	54.29	+0.02	3.00
International	6	62.34	63.22	67.25	+0.02	1.44
Dividend & Growth	6	50.01	51.23	54.49	-0.18	5.51
Global Gwth & Sec	6	51.14	51.47	54.75	-0.03	1.83
Aberforth Unit Trust Managers Ltd (1600)F						
16 Chester St, Edinburgh EH3 7RA 031 220 0733						
UK Small Cos	0	975.00	975.00	1004.00		-
Abtrust Unit Trust Managers Ltd (1200)H						
10 Queens Terrace, Aberdeen AB9 1QJ 0800 833580						
Amer Inc & Growth	5¼	30.02	30.02xd	31.88	+0.35	2.51
Cash	-	50.68	50.68xd	50.68	+0.03	12.10
European	5¼	72.01	72.01	76.47	-0.52	0.00
European Income	5¼	74.55	75.02	79.14	-0.50	2.55
Exempt	1	747.3	747.3xd	772.9	-7.10	3.01

	Init Charge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
PO Box 410, Chester X, CH99 9QS 0244 680066						
M & S Inv P'folio	5¼	111.7	112.1	119.8	-0.6	3.15
Do Accum	5¼	118.1	118.5	126.7	-0.6	3.15
UK Sel P'folio	5¼	99.76	100.7	107.7	-0.9	4.30
Do Accum	5¼	104.4	105.3	112.6	-0.9	4.30
Marlborough Fund Managers Ltd (1630)F						
57 Victoria Square, Bolton, BL1 1LA 0204 364842						
Managed Tst	5	48.07	48.36	51.44		5.10
Martin Currie Unit Trusts Ltd (0905)H						
48 Melville St, Edinburgh EH3 7HF Dlng: 031-220 4924						
Far East (Pacific)	5¼	101.2	101.2	107.4	+0.2	1.07
Income & Growth	5¼	63.08	63.08	66.96	-0.53	4.73
European (z)	5¼	54.59	54.59	57.95	-0.07	1.84
Nth American (z)	5¼	39.32	39.32	41.74	-0.05	1.26
Intl Growth (9-1)	5¼	66.18	67.51xd	71.66	-0.11	0.82
UK Growth	5¼	56.39	56.39	59.86	-0.27	1.94
Intl Income	5¼	48.60	49.10xd	52.12	+0.1	6.46
High Yield	5¼	46.00	46.58xd	49.44	-0.27	7.34
Charities	5¼	92.88	94.15	99.94	-0.66	5.60
Japan	5¼	42.38	42.38xd	44.98	+0.13	-
Matheson Unit Trust Managers Ltd (1200)H						
Admin: 5 Rayleigh Rd, Hutton, Brentwood, Essex						
Enquiries: 0277 227300 Dealing: 0277 261010						
UK Growth (4-1)	6	67.86	69.39xd	74.21	-0.70	3.33
UK High Income	6	34.86	35.44xd	37.90	-0.32	5.33
Far Eastern	5	110.29	110.9	118.4	+0.60	1.51
Smaller Cos	5	45.74	45.74	48.82	-0.08	3.25
Olympiad	5¼	46.42	46.42	49.55	+0.08	0.99
Olympiad Income	5¼	43.53	43.53	46.44	-0.01	4.80
UK Growth	5	71.96	72.52xd	77.40	-0.56	1.75
NFU Mutual Unit Mngrs Ltd (1400)F						
Admin: 5 Rayleigh Road, Hutton, Brentwood, Essex						
Enquiries 0277 227300 Dealing 0277 261010						
Avon Equity	6	91.65	93.25	99.20	-0.98	3.78
NM Unit Trust Mngrs (1200)H						
The Bilton Centre, North Harbour, Portsmouth						
Enquiries: 0705 372222 Dealing: 0705 387730						
American ♥	5¼	32.94	32.94	35.13	+0.05	1.45
(Accum Units) ♥	5¼	35.25	35.25	37.60	+0.06	1.45
Australian ♥	5¼	180.70	182.20	195.40	+2.38	2.81
(Accum Units) ♥	5¼	203.50	205.20	220.10	+2.60	2.81
Conscience	5¼	51.89	52.77	56.31	-0.32	1.39
(Accum Units)	5¼	54.41	55.33	59.05	-0.34	1.39
European	5¼	139.90	141.30xd	150.70	-1.08	1.04
(Accum Units)	5¼	148.00	149.90	159.80	-1.10	1.04
Extra Income	5¼	65.90	66.71xd	71.19	-0.38	8.50
(Accum Units)	5¼	89.58	90.68	96.77	-0.52	8.58
Far East Gth Acc	5¼	116.70	118.50xd	126.60	+0.70	0.25
Gilt & F.I.	5¼	51.01	51.01	54.00	+0.05	9.28
(Accum Units)	5¼	107.40	107.40	113.60	+0.10	9.28

Guide to pricing of Authorised Unit Trusts

Compiled with the assistance of Lautro §§

INITIAL CHARGE: Charge made on sale of units. Used to defray marketing and administrative costs, including commission paid to intermediaries. This charge is included in the price of units.

OFFER PRICE: Also called issue price. The price at which units are bought by investors.

BID PRICE: Also called redemption price. The price at which units are sold back by investors.

CANCELLATION PRICE: The minimum redemption price. The maximum spread between the offer and bid prices is determined by a formula laid down by the government. In practice, most unit trust managers quote a much narrower spread. As a result, the bid price is often set above the cancellation price. However, the bid price might be moved to the cancellation price by the managers at any time, usually in circumstances in which there is a large excess of sellers of units over buyers.

TIME: The time shown alongside the fund manager's name is the time of the unit trust's valuation point unless another time is indicated by the symbol alongside the individual unit trust name. The symbols are as follows: (♥) - 0001 to 1100 hours; (♣) - 1101 to 1400 hours; (♦) - 1401 to 1700 hours; (♠) - 1701 to midnight. Daily dealing prices are set on the basis of the valuation point, a short period of time may elapse before prices become available.

HISTORIC PRICING: The letter H denotes that the managers will normally deal on the price set on the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers must deal at a forward price on request, and may move to forward pricing at any time.

FORWARD PRICING: The letter F denotes that the managers deal at the price to be set on the next valuation. Investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper are the most recent provided by the managers.

SCHEME PARTICULARS AND REPORTS: The most recent report and scheme particulars can be obtained free of charge from fund managers.

Other explanatory notes are contained in the last column of the FT Managed Funds Service.

§§ Life Assurance and Unit Trust Regulatory Organisation.
Centre Point,
103 New Oxford Street, London WC1A 1QH
Tel: 071 – 379 – 0444.

هكذا من الأصل

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INSURANCES

OTHER UK UNIT TRUSTS

Continued on next page

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N & P Life Assurance Ltd

Prosperity Life Assurance Ltd

Royal Heritage Life Assurance Ltd—Contd.

Shield Assurance Ltd

Swiss Life (UK) PLC

CMI Insurance Co Ltd—Contd.

James Campbell Financial Services

Hambros Fd Mgrs (CI) Ltd

National Financial Management Corp PLC

Skandia Life Assurance Co Ltd

Chase de Vere PLC

ECU Futures Plc

OFFSHORE INSURANCES

OFFSHORE AND OVERSEAS

BERMUDA (SIB RECOGNISED)

CANADA (SIB RECOGNISED)

GUERNSEY (SIB RECOGNISED)

GUERNSEY (REGULATED)

MANAGEMENT SERVICES

هدية من الأهرام

FT MANAGED FUNDS SERVICE

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	Bid Price	Offer Price	+ or -	Yield Gross
U.S. Treasury Securities Fund Ltd				
Short Term Shares	$758.17		.....	-
Fixed Income Shares	$880.13		.....	-
Yamaichi Capital Mangmt (Guernsey) Ltd				
Japan Mkts Growth	$10.86		-0.16	-
Yamaichi ISS Fund	$8.04		-0.11	-
Yamaichi CB Plus Fund	$8.56		-0.09	-
Thai Inv Fund	$11.77		.....	-

IRELAND (SIB RECOGNISED)

	Init Charge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
GAM Fund Management Ltd (u)						
29 Kildare Street, Dublin 010 353 1760 630						
GAM Universal US $Hr Acc		$-	113.35		.....	-
GAM Universal US $Hr Inc		$-	113.35		.....	-
GAM Universal DM Acc		DM-	120.40		.....	-
GAM Universal DM Inc		DM-	120.40		.....	-
MI Global Asset Mngmt Co Ltd "MI Trusts"						
MI Global Dollar		$-	0.98	1.05	-0.01	-

IRELAND (REGULATED)(**)

	Bid Price	Offer Price	+ or -	Yield Gross
Bank of Ireland Unit Managers Ltd				
Global Scap	59.96	10.26	.....	-
European Bond	[illegible]	[illegible]	.....	-
Investor Portfolio				
Equity/America	$11.50	12.20	.....	-
Equity/Europe	$9.76	10.36	.....	-
Bond/America	$10.42	11.06	.....	-
Bond/Europe	$9.64	10.23	.....	-
Bond/Japan	$10.03	10.64	.....	-
World Inv Trust	$10.88	11.54	.....	-
Opportunity Europe	$11.47	12.17	.....	-
Baring International Fd Mngrs (Ireland) Ltd				
Australia	$15.44	16.22	-0.21	1.05
Japan Tech	$67.04	70.40	-0.79	-
Japan Fund	$28.18	29.59	-0.32	0.17
Japan New Gwth Fd	$21.06	22.12	-0.23	-
Malay Sing	$58.36	61.28	-0.18	0.31
Nth American	$21.43	22.51	-0.25	[illegible]

	Init Charge	Canc. Price	Bid Price	Offer Price	+ or -	Yield Gr's
INVESCO MIM International (Jersey) Ltd						
PO Box 271, St Helier, Jersey 0534 73114						
Jersey Gilt (z)	5½	0.1717	0.1717	0.1809	[illegible]	9.12
Lloyds Bank (CI) U/T Mgrs.						
PO Box 195, St Helier, Jersey 0534 27561						
Lloyds Tst. Gilt	2½	9.335	9.350	9.594	[illegible]	11.36
Dealing daily						
Midland Bank Fund Managers (Jersey) Ltd						
PO Box 26, St Helier, Jersey 0534 606000						
Intl Circuit Portfolio	6	103.87	103.87	110.12	+0.82	1.59
Gilt	5	91.67	91.67	94.53	-0.01	10.58
For MIM see INVESCO MIM						
Royal Trust Jsy Fd Mngt Ltd (1400)F						
PO Box 428, St Helier, Jersey 0534 76077						
Govt Secs Fd	4	55.73	55.73	58.20	-0.07	9.62
TSB Trust Funds (CI)						
PO Box 538, St Helier, Jersey 0534 73494						
TSB Offshore Investment Fund Ltd						
Stg Deposit Class	3	101.94	101.94	105.00	+0.09	11.75
Gilt & Fixed Interest	5	101.86	101.86	104.90	+0.05	11.63
Blue Chip & Gilt Edged	5	50.28	50.28	53.66	-0.30	5.40
International Bond	5	110.64	110.64	116.21	+1.58	7.52
UK Equity	5	109.20	109.20	118.39	-0.10	1.62
International Equity	5	111.07	111.07	118.74	-0.18	0.43
Far Eastern	5	99.08	99.08	105.99	+0.51	0.00
European	5	85.07	85.07	89.99	-0.38	0.42
Pan American	5	105.96	114.04	121.85	+2.20	0.79
TSB Gilt Fund Ltd						
Quarterly Share	3	96.45	96.45	99.49	+0.31	10.75
Monthly Share	3	96.18	96.18	99.19	+0.30	10.79

JERSEY (REGULATED)(**)

	Bid Price	Offer Price	+ or -	Yield Gross
Barclays Intl Funds				
Currency Funds				
Sterling	£20.17		+0.02	11.4
US Dollar	$30.62		+0.02	5.2

ISLE OF MAN (SIB RECOGNISED)

ISLE OF MAN (REGULATED)(**)

JERSEY (SIB RECOGNISED)

LUXEMBOURG (SIB RECOGNISED)

LUXEMBOURG (REGULATED)(**)

SWITZERLAND (SIB RECOGNISED)

OTHER OFFSHORE FUNDS

MANAGED FUNDS NOTES

CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Dollar keeps up the gallop

THE DOLLAR was very firm yesterday, particularly against the depressed D-Mark. The defeat of the ruling Christian Democrats in Sunday's state election in the Rhineland Palatinate, the home state of German Chancellor Helmut Kohl, increased downward pressure on the currency.

Mr Kohl's political difficulties weighed on the D-Mark at a time when it is already suffering from the economic problems caused by German unification and concern about growing instability in the Soviet Union.

The decline of the D-Mark weakened all members of the European exchange rate mechanism against the dollar, but the US currency was strong in its own right, improving against non-ERM units such as the Swiss franc and the Japanese yen.

Hopes of a gradual recovery in US economic performance and fading expectations of lower US interest rates helped push the dollar up to another 16-month high against the D-Mark. This followed on from the renewed surge in demand starting Friday, which at that time also lifted the dollar to its highest level for about 16 months.

There was no sign of central bank intervention as it broke through technical resistance at DM1.7620 yesterday and touched the day's high at another resistance point of DM1.7680, before closing in London at DM1.7660 compared with DM1.7360 on Friday.

Finance ministers from the Group of Seven leading industrial nations meet in Washington next weekend, amid concern at an apparent lack of agreement on interest rate policy. It was also noted that the US administration's desire for lower rates does not appear to be shared by members of the policy-making US Federal Open Market Committee.

A US press report last week suggested that the FOMC has agreed interest rates may be low enough to end the recession. This coupled with concern among some FOMC members about rekindling inflation if rates are cut were major factors sparking the dollar's surge over the last two trading days.

At the London close the dollar had also advanced to Y139.40 from Y138.35; to SFr1.4795 from SFr1.4705; and to FFr5.9475 from FFr5.8575. Its index rose to 67.1 from 66.3.

The D-Mark maintained the downward trend against the yen, which resumed last Thursday after the Bundesbank council failed to increase official German interest rates. In London the D-Mark finished at Y78.95 against Y79.70 on Friday and Y81.00 on Thursday.

Sterling lost ground in the ERM, but stayed second strongest, according to figures from the European Commission.

The pound fell 2.95 cents to $1.6925, after losing 5 cents on Friday. It remained steady against the D-Mark, however, closing unchanged at DM2.9900, while falling to FFr10.0650 from FFr10.0875; to SFr2.5050 from SFr2.5325; and to Y236.00 from Y238.25. Sterling's index fell 0.6 to 91.6.

£ IN NEW YORK

Apr.22	Latest	Previous Close
£ Spot	1.6950-1.6960	1.7210-1.7220
1 month	0.80-0.78pm	0.80-0.78pm
3 months	2.28-2.25pm	2.32-2.30pm
12 months	6.80-6.70pm	6.88-6.78pm

Forward premiums and discounts apply to the US dollar

STERLING INDEX

[illegible]

CURRENCY MOVEMENTS

[illegible]

CURRENCY RATES

[illegible]

OTHER CURRENCIES

	£	$
Iran	120.70*	67.00*
Korea(Sth)	1232.80 - 1252.75	722.60 - 728.40
Kuwait	N/A	N/A
Luxembourg	61.40 - 61.50	36.25 - 36.35
Malaysia	4.6965 - 4.7045	2.7570 - 2.7600
Mexico	5099.20 - 5119.20	2996.00 - 3006.00
N Zealand	2.9060 - 2.9110	1.7085 - 1.7105
Saudi Ar	6.4050 - 6.4590	3.7490 - 3.7510
Singapore	3.0305 - 3.0375	1.7765 - 1.7785
S.Af (Cm)	4.7490 - 4.7610	2.7930 - 2.7960
S.Af (Fn)	5.6140 - 5.7085	3.3110 - 3.3670
Taiwan	46.40 - 46.50	27.35 - 27.40
U.A.E.	6.0490 - 6.3490	3.6720 - 3.6740

* Selling rate

EMS EUROPEAN CURRENCY UNIT RATES

	Ecu Central Rates	Currency Amounts Against Ecu Apr 22	% Change from Central Rate	% Spread vs Weakest Currency	Divergence Indicator
Spanish Peseta	133.631	127.282	-4.75	6.01	83
Sterling	0.696904	0.689774	-1.02	2.02	19
Italian Lira	1538.24	1524.98	-0.86	1.85	50
Belgian Franc	42.4032	42.4531	0.12	0.86	2
Dutch Guilder	2.31643	2.32764	0.48	0.49	-16
D-Mark	2.05586	2.06662	0.52	0.45	-24
Irish Punt	0.767417	0.771651	0.55	0.42	-18
Danish Krone	7.84195	7.88566	0.56	0.42	-19
French Franc	6.89509	6.96236	0.98	0.00	-45

Ecu central rates set by the European Commission. Currencies are in descending relative strength. Percentage changes are for Ecu; a positive change denotes a weak currency. Divergence shows the ratio between two spreads: the percentage difference between the actual market and Ecu central rates for a currency, and the maximum permitted percentage deviation of the currency's market rate from its Ecu central rate.
Adjustment calculated by Financial Times.

POUND SPOT - FORWARD AGAINST THE POUND

Apr 22	Day's spread	Close	One month	% p.a.	Three months	% p.a.
US	1.6900 - 1.7175	1.6920 - 1.6930	0.80-0.78cpm	5.60	2.28-2.25pm	5.35
Canada	1.9605 - 1.9860	1.9625 - 1.9635	0.42-0.34cpm	2.32	1.13-1.00pm	2.17
Netherlands	3.3600 - 3.3760	3.3600 - 3.3700	[illegible]	2.67	[illegible]	2.45
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

DOLLAR SPOT - FORWARD AGAINST THE DOLLAR

[illegible]

EURO-CURRENCY INTEREST RATES

	Short term	7 Days notice	One Month	Three Months	Six Months	One Year
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Long term Eurodollars: two years 7¾-7⅝ per cent; three years 8-7⅞ per cent; four years 8⅛-8 per cent; five years [illegible] per cent nominal. Short term rates are call for US Dollars and Japanese Yen; others, two days' notice.

EXCHANGE CROSS RATES

Apr.22	£	$	DM	Yen	F Fr.	S Fr.	H Fl.	Lira	C$	B Fr.	ECU
£	1	1.693	2.990	236.0	10.07	2.505	3.365	2207	1.963	61.45	1.446
$	0.591	1	1.766	139.4	5.948	1.480	1.988	1304	1.159	36.30	0.854
DM	0.334	0.566	1	78.93	3.368	0.838	1.125	738.1	0.657	20.55	0.484
YEN	4.237	7.174	12.67	1000.	42.67	10.61	14.26	9352	8.318	260.4	6.127
F Fr.	0.993	1.681	2.969	234.4	10.	2.488	3.342	2192	1.949	61.02	1.436
S Fr.	0.399	0.676	1.194	94.21	4.020	1	1.343	881.0	0.784	24.53	0.577
H Fl.	0.297	0.503	0.889	70.13	2.993	0.744	1	655.9	0.583	18.26	0.430
Lira	0.453	0.767	1.355	106.9	4.563	1.135	1.525	1000.	0.889	27.84	0.655
C$	0.509	0.862	1.523	120.2	5.130	1.276	1.714	1124	1	31.30	0.737
B Fr.	1.627	2.755	4.866	384.1	16.39	4.076	5.476	3592	3.194	100.	2.353
ECU	0.692	1.171	2.068	163.2	6.964	1.732	2.327	1526	1.358	42.50	1

Yen per 1,000: French Fr. per 10: Lira per 1,000: Belgian Fr. per 100.

FINANCIAL FUTURES AND OPTIONS

[illegible]

FT-SE 100 INDEX
£25 per full index point

	Close	High	Low	Prev.
Jun	2511.0	2534.0	2508.0	2544.0
Sep	2552.0			2584.5
Dec	2597.5			2630.0

Estimated volume 5304 (3870)
Previous day's open int. 25141 (25281)

EURO SWISS FRANC
SFR 1m points of 100%

	Close	High	Low	Prev.
Jun	91.78	91.84	91.74	91.78
Sep	92.36	92.40	92.31	92.36
Dec	92.66	92.70	92.64	92.61
Mar	92.90	92.94	92.94	92.95

Estimated volume 1644 (2796)
Previous day's open int. 15685 (16299)

FT FOREIGN EXCHANGE RATES

Spot	1-mth.	3-mth.	6-mth.	12-mth.
1.6925	1.6846	1.6699	1.6518	1.6250

IMM-STERLING $s per £

	Latest	High	Low	Prev.
Jun	1.6900	1.6904	1.6850	1.7028
Sep	1.6660	1.6698	1.6650	1.6826
Dec	-	-	1.6550	1.6672

OPTION ON LONG-TERM FRENCH BOND (MATIF)

Strike	Calls June	Calls Sept.	Calls Dec.	Puts June	Puts Sept.	Puts Dec.
105	1.57	2.14	-	0.28	0.90	-
106	0.86	1.57	-	0.61	1.29	-
107	0.41	1.09	-	1.10	1.76	-
108	0.17	0.72	-	-	-	-
109	0.07	0.45	-	-	-	-
Open Int	121,470	37,395	1,401	133,028	41,199	1,601

Estimated volume 33,844 Total Open Interest 336,094

BASE LENDING RATES

	%		%		%
ABN Bank	12	Comm.Bk.of London Plc	12	McDonnell Douglas Bnk.	12
Adam & Company	12	Co-operative Bank	12	Midland Bank	12
Allied Trust Bank	12	Coutts & Co	12	Mount Banking	12
AIB Bank	12	Cyprus Popular Bk	12	Nat. Bk. of Kuwait	13½
● Henry Ansbacher	12	Dunbar Bank PLC	12	NatWestminster	12
B & C Merchant Bank	12	Duncan Lawrie	12	Northern Bank Ltd	12
Bank of Baroda	12	Equatorial Bank plc	12½	Nykredit Mortgage Bank	12½
Banco Bilbao Vizcaya	12	Exeter Bank Limited	12½	Provincial Bank PLC	14
Bank Credit & Comm	12	Financial & Gen. Bank	12	Roxburghe Bank Ltd.	13½
Bank of Cyprus	12	First National Bank Plc	15	Royal Bk of Scotland	12
Bank of Ireland	12	● Robert Fleming & Co.	12	● Smith & Williamson Secs.	12
Bank of India	12	Robert Fraser & Ptnrs.	12½	Standard Chartered	12
Bank of Scotland	12	Girobank	12	TSB	12
Banque Belge Ltd	12	● Guinness Mahon	12	Unibank plc	12
Barclays Bank	12	● Hambros Bank	12	● United Bk of Kuwait	12
Benchmark Bank	12	Hampshire Trust Plc	13½	United Mizrahi Bank	12½
Brit Bk of Mid East	12	Heritable & Gen Inv Bnk.	12	Unity Trust Bank Plc	12
● Brown Shipley	12	● Hill Samuel	12	Western Trust	12
CL Bank Nederland	12½	C. Hoare & Co.	12	Westpac Bank Corp.	12
● Charterhouse Bank	12	Hongkong & Shanghai	12	Whiteaway Laidlaw	12
Citibank NA	12	● Leopold Joseph & Sons	12	Yorkshire Bank	12
City Merchants Bank	12	Lloyds Bank	12		
Clydesdale Bank	12	Meghraj Bank Ltd	12		

● Members of British Merchant Banking & Securities Houses Association.

MONEY MARKETS

London rates firmer

NEWS OF a sharp rise in March UK retail sales pushed interest rates higher on the London money market yesterday. Dealers expected a very small increase of about 0.1 per cent, and were concerned that March sales rose 3.7 per cent after falling marginally in February.

The authorities said retail demand was boosted by buying ahead of VAT increases, announced in the Budget on March 19, but not effective until April 1. Nevertheless the market is concerned that the figure may delay further cuts in UK bank base rates.

UK clearing bank base lending rate 12 per cent from April 12, 1991

Three-month sterling interbank rose to 11⅞-11¾ from 11$\frac{13}{16}$-11$\frac{11}{16}$ per cent and 12-month money firmed to 11$\frac{7}{16}$-11$\frac{5}{16}$ from 11⅜-11¼ per cent.

On Liffe short sterling futures weakened following the retail sales news. June delivery opened at 88.69 and fell to a low of 88.63 before closing at 88.64 compared with 88.71 previously.

Day-to-day credit was in short supply on the cash market. The Bank of England initially forecast a shortage of £900m, but revised this to £1,100m at noon and to £1,050m in the afternoon. Total assistance of £875m was provided.

An early round of help was offered and at that time the authorities bought £161m bills outright, by way of £23m bank bills in band 1 at 11⅞ per cent and £138m bank bills in band 2 at 11$\frac{13}{16}$ per cent.

Before lunch another £153m bills were purchased, via £45m bank bills in band 1 at 11⅞ per cent and £108m bank bills in band 2 at 11$\frac{13}{16}$ per cent. In the afternoon £561m bills were bought, through £81m bank bills in band 1 at 11⅞ per cent, £42m Treasury bills in band 2 at 11$\frac{13}{16}$ per cent and £438m bank bills in band 2 at 11$\frac{13}{16}$ per cent.

Bills maturing in official hands, repayment of late assistance and a take-up of Treasury bills drained £949m, with exchequer transactions absorbing £250m and bank balances below target £270m. These outweighed a fall in the note circulation adding £570m to liquidity.

In Frankfurt call money rose to 8.85 from 8.80 per cent in response to Friday's warnings by top Bundesbank officials that German monetary policy will stay tight.

Dealers said they expect call money to remain just below the 9 per cent Lombard rate, but are waiting for further guidance from the terms of this week's securities repurchase agreement tender.

FT LONDON INTERBANK FIXING

(11.00 a.m. Apr.22) 3 months US dollars		6 months US Dollars	
bid 6$\frac{3}{16}$	offer 6$\frac{5}{16}$	bid 6$\frac{5}{16}$	offer 6$\frac{7}{16}$

The fixing rates are the arithmetic means rounded to the nearest one-sixteenth, of the bid and offered rates for $10m quoted to the market by five reference banks at 11.00 a.m. each working day. The banks are National Westminster Bank, Bank of Tokyo, Deutsche Bank, Banque National de Paris and Morgan Guaranty Trust.

MONEY RATES

NEW YORK (Lunchtime)

Prime rate	9
Broker loan rate	7½
Fed.funds	5$\frac{13}{16}$
Fed.funds at intervention	-

Treasury Bills and Bonds

One month	5.56	Three year	7.23
Two month	5.61	Four year	7.49
Three month	5.88	Five year	7.78
Six month	6.00	Seven year	8.00
One year	6.27	10-year	8.12
Two year	7.05	30-year	8.26

Apr 22	Overnight	One Month	Two Months	Three Months	Six Months	Lombard Intervention
Frankfurt	8.80-8.90	8.80-8.95	8.90-9.05	8.95-9.15	9.05-9.25	9.00
Paris	9¼-9⅜	[illegible]	-	[illegible]	-	9.25
Zurich	7¾-8¼	8¼-8⅝	-	8¼-8⅝	-	-
Amsterdam	8.55-8.70	8.95-9.05	-	9.06-9.14	-	-
Tokyo	8⅛-8¼	[illegible]	-	7⅞-7⅞	-	-
Milan	11½-11¾	[illegible]	-	11¾-12	-	-
Brussels	8.81-8.93	8⅞-9	-	9¼-9¾	-	-
Dublin	8⅝-8¾	9¼-9½	10$\frac{1}{16}$-10$\frac{3}{16}$	[illegible]	10-10¼	-

LONDON MONEY RATES

Apr 22	Overnight	7 days notice	One Month	Three Months	Six Months	One Year
Interbank Offer	14	12	[illegible]	[illegible]	[illegible]	[illegible]
Interbank Bid	11½	11¾	[illegible]	[illegible]	[illegible]	[illegible]
Sterling CDs	-	-	[illegible]	[illegible]	[illegible]	[illegible]
Local Authority Deps.	11¾	11¾	[illegible]	[illegible]	[illegible]	[illegible]
Local Authority Bonds	-	-	-	-	-	-
Discount Mkt Deps	11¼	11¾	[illegible]	[illegible]	-	-
Company Deposits	-	-	[illegible]	[illegible]	[illegible]	[illegible]
Finance House Deposits	-	-	[illegible]	[illegible]	[illegible]	[illegible]
Treasury Bills (Buy)	-	-	[illegible]	[illegible]	[illegible]	-
Bank Bills (Buy)	-	-	[illegible]	[illegible]	[illegible]	-
Fine Trade Bills (Buy)	-	-	[illegible]	12	[illegible]	-
Dollar CDs	-	-	6.15	6.17	6.33	6.83
SDR Linked Dep. Offer	-	-	[illegible]	[illegible]	[illegible]	8
SDR Linked Dep. Bid	-	-	[illegible]	[illegible]	[illegible]	[illegible]
ECU Linked Dep. Offer	-	-	[illegible]	[illegible]	[illegible]	9½
ECU Linked Dep. Bid	-	-	[illegible]	[illegible]	[illegible]	9½

Treasury Bills (sell); one-month 11$\frac{13}{16}$ per cent; three months 11$\frac{5}{8}$ per cent; six months 10¾ per cent; Bank Bills (sell): one-month 11$\frac{13}{16}$ per cent; three months 11¾ per cent; [illegible]

MONEY MARKET FUNDS

Money Market Trust Funds

[illegible]

Money Market Bank Accounts

[illegible]

JOTTER PAD

CROSSWORD

No.7,525 Set by VIXEN

ACROSS

1 Causing an accountant to give voice about a rogue's gushing (9)
6 A model's vexed question (5)
9 People having a large number returned several (5)
10 Barmen pin a club's letters all over the place (9)
11 A pit occasioning some gloominess (10)
12 Disorder in the home's soon set straight (4)
14 A condition both for and against one's nothing! (7)
15 Welsh place, as new as can be (7)
17 Venture quietly to carry on (7)
19 Intend to appear in torn clothing (7)
20 The period is certainly right (4)
22 Restores control by the USA (10)
25 Well-shaped white rose that's really "different" (9)
26 A good man will hold firm where speed's the thing! (5)
27 Only a little silken yarn is produced in this country (5)
28 They don't reveal the extent of careless talk (3-6)

DOWN

1 Paid for as received – a newsman made secret arrangements (5)
2 Her poem as translated could well convey a message (9)
3 Check "X" on entering a bus, is quite sober (10)
4 The artist laid it on thick (7)
5 A sculptor of monkeys (7)
6 Coppers help, so get rewarded (4)
7 Surprisingly, takes the prize (5)
8 Stand out against insect repellent (9)
13 An individual who tries and tries (10)
14 Jabberwocky flower bird (9)
16 Display a single glass? (9)
18 Time for getting uniform (7)
19 Manage with a smaller amount, having no ladder (7)
21 Wooden – not in the least colourful (5)
23 Places where sties may be built (5)
24 Making a note on a plot (4)

Solution to Puzzle No.7,524

MADCAP TESTTEAM
JACKSPRAT OSIER
SEMI STATIONERY
INTERIM EGGNOG
ADVERB PALETTE
DOUBTINGLY SPAR
GUSTO ICEHOCKEY
OUTWEIGH KERNEL

WORLD STOCK MARKETS

AUSTRIA | BELGIUM/LUXEMBOURG | DENMARK | FINLAND | FRANCE | FRANCE (continued) | GERMANY | GERMANY (continued) | ITALY | NETHERLANDS | NORWAY | SPAIN | SWEDEN | SWEDEN (continued) | SWITZERLAND | SOUTH AFRICA | JAPAN | AUSTRALIA | AUSTRALIA (continued) | HONG KONG | MALAYSIA | SINGAPORE

[illegible]

Price data supplied by Telekurs.

NOTES – Prices on this page are as quoted on the individual exchanges and are last traded prices. [illegible]

CANADA

TORONTO

3:00 pm prices April 22

Quotations in cents unless marked $

[illegible]

MONTREAL

3:00 pm prices April 22

[illegible]

Total Sales 6,256,100 shares

INDICES

NEW YORK

DOW JONES	Apr. 19	Apr. 18	Apr. 17	Apr. 16	1991 HIGH	1991 LOW	Since compilation HIGH	Since compilation LOW
‡Industrials	2965.59	2999.26	3004.46	2986.88	3004.46 (17/4)	2470.30 (9/1)	3004.46 (17/4/91)	41.22 (2/7/32)
Home Bonds	94.19	94.53	94.31	94.26	94.86 (15/2)	91.30 (16/1)	95.51 (9/2/87)	54.99 1/10/81)
Transport	1172.07	1178.07	1166.26	1143.51	1178.07 (18/4)	894.30 (7/1)	1532.01 (5/9/89)	12.32 (8/7/32)
Utilities	212.65	216.30	219.76	220.89	220.89 (16/4)	199.64 (16/1)	236.23 (2/1/90)	10.50 (8/4/32)

‡Day's High 3000.25 (3017.82) Low 2943.56 (2991.34)

STANDARD AND POOR'S	Apr. 19	Apr. 18	Apr. 17	Apr. 16	1991 HIGH	1991 LOW	Since compilation HIGH	Since compilation LOW
Composite ‡	384.19	388.45	390.45	387.62	390.45 (17/4)	311.49 (9/1)	390.45 (17/4/91)	4.40 (1/6/32)
Industrials	457.33	463.23	462.40	456.93	463.23 (18/4)	364.90 (9/1)	463.23 (18/4/91)	3.62 (21/6/32)
Financial	30.87	31.58	31.49	30.93	31.58 (18/4)	21.96 (9/1)	35.24 (9/10/89)	8.64 (1/10/74)
NYSE Composite	210.23	212.26	213.21	211.71	213.21 (17/4)	170.97 (9/1)	213.21 (17/4/91)	4.46 (25/4/42)
Amex Mkt. Value	370.83	373.40	372.46	369.99	373.40 (18/4)	296.72 (14/1)	397.03 (10/10/89)	29.31 (9/12/72)
NASDAQ Composite	501.19	506.62	511.31	506.75	511.31 (17/4)	355.75 (14/1)	511.31 (17/4/91)	54.87 (31/10/72)

	Apr.12	Apr.5	Mar.22	year ago (approx.)
Dow Industrial Div. Yield	3.45	3.48	3.53	3.98

	Apr.17	Apr.10	Apr.3	year ago (approx.)
S & P Industrial div. yield	2.69	2.85	2.81	3.04
S & P Indl. P/E ratio	19.07	18.17	18.44	15.13

NEW YORK ACTIVE STOCKS

Friday	Stocks traded	Closing price	Change on day
Amer Express	3,695,300	28	- 1¼
Citicorp	3,616,900	15⅞	- ⅜
Nabisco (RJ)	3,142,900	11¾	- ¼
Global Mar	2,993,800	4⅞	+ ⅜
Philip Morris	2,974,300	68⅝	- 1⅝
Saatchi Co	2,882,700	1¼	+ ⅛
IBM	2,109,300	109½	- ⅛
AT & T	2,103,300	37¼	- ⅜
Upjohn	2,062,100	46⅞	- ¾
Gen Motors	2,011,300	39¼	- ⅛

TRADING ACTIVITY

† Volume (Millions)	Apr. 19	Apr. 18	Apr. 17
New York	195.510	217.410	248.887
Amex	15.020	15.001	16.666
NASDAQ	218.014	255.531	267.555
Issues Traded	2,059	2,071	2,096
Rises	515	669	1,025
Falls	1,084	942	572
Unchanged	460	460	499
New Highs	65	147	223
New Lows	10	4	2

CANADA

TORONTO	Apr. 19	Apr. 18	Apr. 17	Apr. 16	1991 HIGH	1991 LOW
Metals & Minerals	3168.52	3227.79	3211.26	3147.92	3284.18 (5/3)	2632.06 (9/1)
Composite	3495.97	3533.93	3545.93	3539.73	3571.53 (6/3)	3161.95 (15/1)
MONTREAL Portfolio	1839.10	1859.27	1866.25	1865.47	1888.19 (5/3)	1686.89 (9/1)

Base values of all indices are 100 except NYSE All Common – 50; Standard and Poor's – 10; and Toronto Composite and Metals – 1000. Toronto indices based 1975 and Montreal Portfolio 4/1/83. † Excluding bonds.‡ Industrial, plus Utilities, Financial and Transportation. (c) Closed. (u) Unavailable.

	Apr. 22	Apr. 19	Apr. 18	Apr. 17	1991 HIGH	1991 LOW
AUSTRALIA						
All Ordinaries (1/1/80)	1512.9	1520.4	1513.0	1490.6	1520.4 (19/4)	1204.5 (16/1)
All Mining (1/1/80)	663.6	671.1	673.7	665.7	673.7 (18/4)	561.6 (16/1)
AUSTRIA						
Credit Aktien (30/12/84)	515.19	525.36	531.92	533.28	534.81 (16/4)	390.84 (15/1)
BELGIUM						
BEL20 (1/1/91)	1203.29	1210.83	1211.42	1212.15	1212.15 (17/4)	917.59 (17/1)
DENMARK						
Copenhagen SE (3/1/83)	351.00	352.08	351.92	350.93	354.26 (4/4)	302.26 (8/1)
FINLAND						
HEX General (28/12/90)	1110.8	1113.0	1124.1	1143.1	1186.9 (8/4)	890.5 (23/1)
FRANCE						
CAC General (31/12/82)	478.69	483.13†	489.79	485.75	493.78 (9/4)	394.88 (15/1)
CAC 40 (31/12/87)	1767.20	1791.12	1815.74	1829.45	1861.89 (3/4)	1425.26 (15/1)
GERMANY						
FAZ Aktien (31/12/58)	671.03	679.21	684.45	686.01	686.01 (17/4)	570.48 (15/1)
Commerzbank (1/12/53)	1898.00	1923.30	1939.90	1942.30	1942.3 (8/3)	1612.5 (15/1)
DAX (30/12/87)	1571.91	1599.37	1613.76	1623.83	1623.83 (17/4)	1311.82 (16/1)
HONG KONG						
Hang Seng Bank (31/7/64)	3582.49	3667.40	3699.26	3687.81	3869.70 (3/4)	2984.01 (16/1)
IRELAND						
ISEQ Overall (4/1/88)	1475.14	1484.65	1491.72	1494.37	1520.65 (15/3)	1114.86 (25/1)
ITALY						
Banca Com. Ital. (1972)	595.99	602.64	598.70	594.91	602.64 (19/4)	486.26 (29/1)
JAPAN						
Nikkei (16/5/49)	26237.01	26541.97	26798.90	26980.37	27146.91 (18/3)	22442.70 (16/1)
Tokyo SE (Topix) (4/1/68)	1975.53	1998.07	2011.55	2028.82	2028.85 (18/3)	1625.00 (17/1)
2nd Section (4/1/68)	3396.12	3404.88	3383.87	3387.34	3404.88 (19/4)	2473.52 (24/1)
MALAYSIA						
KLSE Composite (4/4/86)	592.16	595.50	595.56	(c)	605.85 (11/3)	470.41 (16/1)
NETHERLANDS						
CBS Ttl.Rtn.Gen.(End 1983)	272.5	275.0	275.2	274.9	275.2 (18/4)	221.4 (16/1)
CBS All Shr (End 1983)	198.9	200.7	200.9	200.9	200.9 (15/4)	162.3 (16/1)
NORWAY						
Oslo SE (Ind) (2/1/83)	714.60	716.60	718.94	718.01	735.00 (8/3)	610.45 (21/1)
PHILIPPINES						
Manila Comp (2/1/85)	1027.12	1071.50	1091.36	1080.93	1154.73 (8/4)	582.64 (18/1)
SINGAPORE						
SES All-Singapore (2/4/75)	416.26	416.32	414.60	411.58	416.32 (19/4)	315.07 (16/1)
SOUTH AFRICA						
JSE Gold (28/9/78)	1031.0	1041.0	1083.0	1068.0	1367.0 (14/1)	971.0 (25/2)
JSE Industrial (28/9/78)	3475.0	3476.0	3470.0	3457.0	3476.0 (19/4)	2829.0 (16/1)
SOUTH KOREA**						
Korea Comp Ex. (4/1/80)	615.61	628.33	625.89	632.55	697.62 (4/1)	614.60 (16/1)
SPAIN						
Madrid SE (30/12/85)	279.58	282.43†	284.11	284.26	289.22 (18/3)	213.70 (14/1)
SWEDEN						
Affarsvarlden Gen. (1/2/37)	1058.1	1073.9	1087.8	1089.1	1119.0 (18/3)	808.4 (8/1)
SWITZERLAND						
Swiss Bank Ind. (31/12/58)	732.0	737.5	734.0	734.2	743.0 (3/4)	590.4 (14/1)
SBC General (1/4/87)	614.8	621.4	619.4	620.8	625.1 (9/4)	487.1 (14/1)
TAIWAN**						
Weighted Price (30/6/66)	5824.0	5739.26	5690.11	5451.06	5739.26 (19/4)	3316.26 (16/1)
THAILAND						
Bangkok SET (30/4/75)	908.90	908.13	904.69	890.46	908.13 (19/4)	582.48 (16/1)
WORLD						
M.S. Capital Intl.(1/1/70) ($)	506.6*	515.6	524.8	529.2	529.2 (17/4)	439.1 (16/1)

**Saturday April 20: Taiwan Weighted Price: 5754.09. Korea Comp Ex. 620.57.
‡ Subject to official recalculation. † Corrected figure. *Calculated at 15.00 GMT.

Base values of all indices are 100 except: BEL20, HEX General, ISEQ Overall and DAX – 1,000, JSE Gold – 255.7, JSE 26 Industrials – 264.3 and Australia All Ordinary and Mining – 500; (c) Closed. (u) Unavailable.

TOKYO - Most Active Stocks

Monday 22 April 1991

	Stocks Traded	Closing Prices	Change on day		Stocks Traded	Closing Prices	Change on day
Nihon Nohyaku	7.4m	2,320	+70	Tokyu	2.8m	1,580	+60
Kobe Steel	4.8m	538	+12	M'bishi Elec	2.7m	783	-10
Nippon Steel	3.8m	471	-9	Japan Stl Wks	2.5m	697	-3
Nippon Yka Kgo	3.6m	1,040	0	M'bishi Heavy	2.6m	771	-12
Chiyoda	3.0m	3,030	-30	Keisei Elc Rl	2.5m	1,780	+30

3:15 pm prices April 22

NEW YORK STOCK EXCHANGE COMPOSITE PRICES

1991 High	Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
15⅞	9¼	AAR Corp	0.48	0.03	13	497	14⅝	14¼	14⅜	-⅛
28¼	21⅝	A L Labs A	0.18	0.00	32	83	27¼	26⅝	27⅛	+⅜
54¾	40⅞	AMP Inc	1.44	0.03	19	1448	53¾	52⅞	53⅛	-⅝
64½	44¼	AMR				182845	62½	60⅝	60⅞	-2
2⅝	1¼	ARX			3	79	2½	2⅜	2⅜	
48¾	41½	ASA	3.00	0.06	13	509	45½	44⅝	45½	+⅛
54	39¼	Abbott Lab x	1.00	0.02	22	3876	51⅝	50⅝	51¼	+⅛
13⅝	9⅞	Abitibi Pr x	0.50	0.04	19	4	13⅛	13⅛	13⅛	-⅛
11⅞	10⅞	ACM Gvt In x				492	u11⅝	11¼	11¼	-⅛
9⅛	8¼	ACM GvOpp x				39	9¼	9⅛	9¼	+⅛
9	8¼	ACM Gvt Sp	1.01	0.11		286	u9	8⅞	8⅞	-⅛
11	9⅞	ACM Gvt Se x				396	u11	10⅞	10⅞	
8¼	7⅝	ACM Man x				262	8⅛	8	8	
12⅝	11⅞	ACM Mangd x				212	u12⅝	12½	12⅝	
7¼	4⅞	Acme Cleve	0.40	0.06	18	104	6½	6¼	6½	+⅛
6	4¼	Acme Elect			16	22	5	d4⅛	5	+⅛
40	22¾	Acuson			25	1153	34⅛	33¼	34⅛	
17⅞	14⅞	Adams Expr	0.48	0.03	0	57	17⅛	17	17⅛	
20⅛	18⅞	Adobe13Pf x	2.40	0.12		8	19⅝	19⅜	19½	
9¼	7	Adobe Res			20	13	7⅞	7⅞	7⅞	-⅛
35⅜	18	Ad Micro				135	33½	32¼	32½	-1⅛
14¼	4⅞	Ad Micro P	3.00	0.24	14	1279	13	12½	12½	-1
5⅛	2¼	Advest Grp	0.16	0.04	8	116	4⅝	4¼	4¼	-⅛
49⅛	33⅞	Aetna Lf x	2.76	0.06	7	1302	48	47	47⅛	-⅞
10⅝	6⅝	Affil A	0.24	0.03	36	1292	8⅞	8⅝	8⅞	+⅛
18¾	12	Ahmanson	0.88	0.05	8	3190	17⅛	16⅝	16⅞	-⅛
6⅞	2⅞	Aileen Inc			5	282	5½	5¼	5½	-⅛
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

- B -

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- H -

- I -

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- K -

- L -

- M -

- N -

- O -

- P -

- R -

NYSE COMPOSITE PRICES

Continued from previous page

1991 High	1991 Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
8	4	RMI Titanm	0.10	0.02	3	613	6⅝	6½	8¼	-⅛
11¼	6⅞	ROCTaiwan				177	10¼	10¼	10¼	-⅛
6¼	4⅜	RPS Realty x	0.80	0.14	7	207	6	6⅛	5⅞	+⅛
73½	48⅛	Racal ADR			20	412	66½	64⅞	65½	-6½
60⅞	46⅛	Ralston Pu	1.08	0.02	15	1069	56⅛	56¼	55⅞	-½
29¾	21⅛	Raychem Co	0.32	0.01	7	392	25½	24⅞	25¼	-⅛
24	19⅞	RayJames F	0.14	0.01	25	107	24¼	23¾	23¾	-⅛
84½	65⅞	Raytheon	2.40	0.03	8	1264	79½	78¼	78⅞	-1¼
38⅛	26⅛	ReadersD A x	0.60	0.02	28	824	38½	36½	36½	-⅝
2½	1½	Reading&B			1	53	2⅛	2⅛	2⅛	
17½	12⅞	RealEstTr	1.42	0.09	13	34	16⅞	16	16⅛	-⅛
7¼	4⅜	RecognitEq			2	18	7	6⅞	6⅞	-⅛
25⅛	10⅞	Reebok Int	0.30	0.01	15	1387	24⅞	24⅞	24⅞	-⅛
⅝	⅛	Regal Intl			12	10	¼	¼	¼	
12⅞	8⅛	Reich&Tang			7	16	12	12	12	
7½	4½	Reliance	0.32	0.06	63	11	5⅞	5⅞	5⅞	-⅛
27¼	20⅛	Repsol ADR			12	336	24	23⅝	23⅞	-⅛
61⅞	47	Repub N Y	1.40	0.02	10	126	59¼	57¼	58⅛	-1
3⅝	1¼	Revco Crp			27	15	2½	2½	2½	
21⅞	18	Reynolds&R	0.84	0.04	9	27	21⅛	21	21	-⅛
65½	52	Reynolds M	1.80	0.03	14	898	60⅞	58⅞	59⅛	-1
34	23	RhoneP ADR				z100	u34	34	31¾	-2¼
18½	9⅞	RhoneP ADS				917	17	16¼	17	-⅛
83¼	67⅞	RhoneP Ror	0.64	0.01	336	182	78½	78¼	78½	+⅛
19½	10¼	RhoneP SA				67	18⅛	17⅞	17⅞	-⅛
47⅞	36½	Rite Aid x	1.00	0.02	17	249	46¼	45¼	46¼	-1
⅜	⅛	River Oaks			0	100	0.15	⅛	⅛	-0.02
11⅞	7⅛	Robert Hal			14	5	11	11	11	
20¼	17⅛	Roch G&E	1.62	0.08	11	51	19⅝	19⅛	19½	-⅛
30½	26	Roch Tel x	1.50	0.05	17	265	30¼	29⅞	30⅛	
20¾	18	RockefCtP	1.92	0.10	19	221	19⅝	19⅜	19½	-⅛

[illegible]

1991 High	1991 Low	Stock	Div.	Yld.	P/E	Sls 100s	High	Low	Close Quote	Ch'ge Prev. Close
24⅞	14⅛	Xtra Corp	0.72	0.03	12	80	23⅞	23½	23¾	-⅛
1½	⅜	Zapata			0	22	¾	⅜	⅝	-⅛
9⅝	6⅝	ZenithElec			3	1301	8¼	7⅞	7⅞	-⅛
18¼	12	Zenith Nat	1.00	0.06	38	10	17⅛	17⅛	17¼	
8	4½	Zenix Inc x	0.87	0.15		12	5⅞	5⅝	5⅞	
14¼	10⅞	Zero Corp	0.72	0.05	14	57	13⅝	13⅝	13⅝	-⅛
41⅞	29½	Zurn Ind	0.88	0.02	13	337	34⅞	34	34¼	-⅝
13½	10⅛	Zweig Fund z				209	12⅞	12⅝	12⅝	-⅛
9¼	8½	Zweig Tot				417	u9¾	9⅝	9¾	

Price data supplied by Telekurs.

Sales figures are unofficial. Yearly highs and lows reflect the previous 52 weeks plus the current week, but not the latest trading day. Where a split or stock dividend amounting to 25 percent or more has been paid, the year's high-only range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration.

a-dividend also xtra(s). b-annual rate of dividend plus stock dividend. c-liquidating dividend. cld-called. d-new yearly low. e-dividend declared or paid in preceding 12 months. g-dividend in Canadian funds, subject to 15% non-residence tax. i-dividend declared after split-up or stock dividend. j-dividend paid this year, omitted, deferred, or no action taken at latest dividend meeting. k-dividend declared or paid this year, an accumulative issue with dividends in arrears. n-new issue in the past 52 weeks. The high-low range begins with the start of trading. nd-next day delivery. P/E price-earnings ratio. r-dividend declared or paid in preceding 12 months, plus stock dividend. s-stock split. Dividends begin with date of split. sls-sales. t-dividend paid in stock in preceding 12 months, estimated cash value on ex-dividend or ex-distribution date. u-new yearly high. v-trading halted. vi-in bankruptcy or receivership or being reorganised under the Bankruptcy Act, or securities assumed by such companies. wd-distributed. wi-when issued. ww-with warrants. x-ex-dividend or ex-rights. xdis-ex-distribution. xw-without warrants. y-ex-dividend and sales in full. yld-yield. z-sales in full.

AMEX COMPOSITE PRICES

3:00 pm prices April 22

[illegible]

NASDAQ NATIONAL MARKET

3:00 pm prices April 22

[illegible]

- X - Y - Z -

Stock	Div.	P/E	Sls 100s	High	Low	Last	Chng
Xilinx		50	1090	24	23¼	23¾	-⅛
XL Data		8	407	5¼	d5¼	5½	-⅛
Xoma Corp		17	2380	29¾	28½	28½	-⅛
YankeeEnS	1.62	17	208	u23¼	22	23	
Yellow Fr	0.94	13	1685	32	30⅞	31	-⅞
York Rsch		18	2467	17⅛	16½	17¼	-⅛
ZionsUtah	1.44	9	65	41¼	40½	40½	-⅛

AMERICA

Mobil counters downtrend on pleasing results

Wall Street

THE DOWNWARD trend in share prices established since record highs for the major indices were reached last week continued yesterday morning, *writes Patrick Harverson in New York.*

By 1.30pm the Dow Jones Industrial Average was down 35.64 at 2,929.95. At noon the index had been almost 40 points lower, but a modest recovery allowed prices to recoup some lost ground.

The more broadly-based Standard & Poor's 500 was also lower, down 2.74 at 381.46 at 1pm. The Nasdaq composite index of over-the-counter stocks, which had enjoyed the best run since the start of the year, continued to underperform yesterday, dropping 6.80 to 494.39.

Turnover on the New York SE was relatively light at 99m shares by 1pm, and with declining stocks outpacing advancing stocks by a margin of almost four to one, the weak tone of the overall market was clearly evident.

The recent market rally was fuelled primarily by expectations of economic recovery, lower interest rates and a return to corporate profitability later this year. These hopes are now fully discounted in share prices, and in the absence of a strong lead from fresh economic news, there is little reason for investors to buy stocks at the moment, say analysts.

Among individual issues, quarterly earnings figures continued to produce a mixed reaction. In the oil sector, Mobil bucked the market trend with a gain of $¾ to $68¾ after reporting a big jump in three-monthly net income to $1.73 a share, up from 94 cents a share in the first quarter of 1990. Amoco also revealed improved first quarter earnings, up from $466m last year to $803m, news which helped the stock firm $⅛ to $53⅝.

The long-running bid battle between NCR and AT&T took another turn yesterday as NCR's stock jumped $5 to $101⅛ on turnover of 1.2m shares after AT&T said it was ready to improve its offer for the computer group to the equivalent of $110 a share. The development left AT&T down $1¼ at $36¼ on turnover of 1.5m shares.

NCNB slipped $1⅛ to $37½ in active trading after the regional banking group said it had held merger talks with Southeast Bancorp and was considering making an offer for the Florida group in the near future. On the news Southeast rose $¾ to $6⅛. Bankers Trust rose $⅛ to $48⅝ after unveiling a 19 per cent decline in first quarter profits to $160m.

Martin Marietta, the defence equipment manufacturer which makes components for the Patriot anti-missile missile system used in the Gulf war, fell $¾ to $56⅞ in the wake of a modest improvement in first quarter net income to $1.44 a share, against $1.32 a share a year ago.

Canada

TORONTO continued to decline at midday on poor corporate results and and recession worries. The composite index lost 15.0 to 3,481.9, slightly above a morning low of 3,479.06. Declines led advances by 253 to 147 on volume of 9.2m shares.

Abitibi-Price rose C$⅛ to C$15⅛ in very light trade. The paper and forest products company posted a first quarter loss of nine cents per share against a loss of 17 cents in the year-ago quarter.

Imperial Oil class A shares were flat at C$55 dlrs after news that the first quarter net fell to 60 cents from 79 cents per share.

SOUTH AFRICA

JOHANNESBURG continued to lack direction. The all-gold index slipped 10 to 1,031 on weaker bullion prices, but the industrial index remained firm at 3,475, just below Friday's record 3,476. The all-share index eased 3 to 2,992.

EUROPE

Germany falls 1.7 per cent in wake of Kohl's defeat

THE WEAKNESS of the German government, and its currency dragged other bourses lower yesterday, *writes Our Markets Staff.*

FRANKFURT reacted to the crushing defeat for Chancellor Helmut Kohl's Christian Democratic party on Sunday's state election in the Rhineland Palatinate, Mr Kohl's home state, and yesterday's fall in the D-Mark to a 16-month low against the dollar.

After an 8.18, or 1.2 per cent fall in the broadly-based FAZ index at midsession, the DAX index closed 27.46, or 1.7 per cent lower at 1,571.91, its intraday low. The heavier falls in the blue chips, said the Dresdner Bank in Frankfurt, indicated that dealers were anticipating foreign selling.

However, the drop in German equity market turnover from DM5.5bn to DM5bn indicated that prices were marked down, rather than forced down by selling volume. By the end of the afternoon, too, the leaders were probably a shade higher than the close on aggregate, despite a fall of more than 1 per cent on Wall Street.

Daimler, Siemens and Deutsche Bank, the main international stocks, fell DM10.50 to DM680.50, DM10.20 to DM583.30 and DM13 to DM628.50 respectively, Daimler after it said that 1990 group operating profit was about 10 per cent below 1989 levels and Siemens on higher net profits for the half-year to March.

PARIS slipped to five-week lows on the last day of the monthly account, depressed by the French franc's weakness against the dollar and by a finance scandal which threatened to endanger the government. The CAC-40 index lost 23.92 or 1.3 per cent to 1,767.20, its lowest close since March 20, in volume estimated at just below FFr2bn. Trading was dominated by arbitrageurs tidying up their positions at the end of the account.

Among the day's big losers was Paribas, down FFr14 to FFr443 with most of the 123,025 shares traded attributed to arbitrage activity ahead of the close of the share swap with Ciments Francais. Alcatel Alsthom, which was weak last week, fell another FFr9 to FFr569 in spite of news that a consortium led by Alcatel had won a FFr10bn train order from the French state railway. Peugeot gave up some of last week's recovery, losing FFr10 to FFr543.

In the retail sector, Galeries Lafayette rose FFr70 or 4.1 per cent to FFr1,800 in thin volume of 380 shares after the company said it would not make a full bid for Nouvelles Galeries, in which it has a 38 per cent stake. Nouvelles Galeries fell FFr40 or 5 per cent to FFr760 with 1,350 shares traded.

MILAN fell across the board in moderate trading, reflecting declines on foreign markets. Insurance and banking shares, which were sought after last week, were particularly hard hit as speculative buying petered out. The Comit index fell 6.65 to 595.99 in volume estimated below Friday's L170bn. Trading is expected to quieten before the public holiday on Thursday.

Fiat fell L69 to L5,460 and dropped further to L5,435 after hours. Among the insurers, Generali lost L400 to L38,100 but eased to L37,975 later in the day, while among banks, Mediobanca fell L415 to L16,215.

Hopes that the protracted feud between Mr Carlo De Benedetti and Mr Silvio Berlusoni for control of the publisher Mondadori would soon be resolved lifted Cir, the holding company of Mr De Benedetti, to L2,680 after hours, after an early fixing at L2,610, down L20. Shares in L'Espresso, 80 per cent controlled by Mondadori, were suspended at L17,000 amid frantic buying before being fixed L920 or 5.9 per cent higher at L16,500.

Olivetti eased L75 to L3,845 ahead of its 1990 results due tomorrow.

AMSTERDAM slumped in low volume on fears that the ever-stronger dollar would do more harm than good to corporate earnings and force the Bundesbank to raise rates to protect the D-Mark. Bonds were easier. The CBS Tendency index fell 1.9 or 2 per cent to 94.1.

Fokker, the aircraft manufacturer, lost Fl 1.70 to Fl 31.30 on a weekend report in the Dutch press that the US airline AMR Corp might not convert 75 aircraft options into firm orders.

STOCKHOLM continued to worry about interest rates and first quarter results. The Affärsvärlden general index fell 15.8 or 1.5 per cent to 1,058.1. Volume fell from SKr308m to SKr264m, with one-third generated by Trelleborg and Ericsson. Trelleborg free B shares fell SKr1 to SKr138 and Ericsson free B's fell SKr7 to Skr192. SKF free B's fell SKr2 ahead of its first quarter earnings report due today.

MADRID was lower. A 21 per cent increase consolidated net profit failed to support Banco Santander, which fell Pta70 to Pta5,510. The general index closed 2.85 lower at 279.58 in low turnover of Pta15bn.

BRUSSELS saw continued interest in Gechem, the polyurethane foam producer, on rumours that Société Générale de Belgique would soon sell its stake. The ordinary shares jumped 5.9 per cent to BFr892. The Bel 20 index fell 7.54 to 1,203.29 in volume of BFr685m.

ZURICH saw the Crédit Suisse index fall 7.3 to 550.0 as a slight firming in domestic interest rates kept most investors on the sidelines.

FT-SE Eurotrack 100 - Apr 22							
Hourly changes							
Open	10 am	11 am	Noon	1 pm	2 pm	3 pm	Close
1115.69	1115.63	1113.37	1112.62	N/A	N/A	1113.62	1112.13
Day's High 1116.26				Day's Low 1111.97			

Apr 19	Apr 18	Apr 17	Apr 16	Apr 15
1122.00	1124.98	1126.20	1113.65	1125.46

Base value 1000 (26/10/90)

The London Stock Exchange had difficulties yesterday in getting accurate currency exchange rates between 12.30 and 14.40. Tables here and on page 40 omit indices calculated between those times.

ASIA PACIFIC

Weaker yen and bond prices prompt profit-taking

Tokyo

THE WEAKER yen and lower bond prices brought profit-taking by investment trusts yesterday, but overall trading remained dull, *writes Emiko Terazono in Tokyo.*

Volume fell to 250m shares, dropping below 300m for the first time since February 4. The Nikkei average, which lost 256.93 on Friday, fell a further 304.96 to 26,237.01, the day's low in spite of sporadic buying by arbitrageurs. The index opened at the session's high of 26,492.45.

Declines overwhelmed rises by 818 to 164, with 151 issues unchanged. The Topix index of all first section stocks fell 22.54 to 1,975.53, and in London the ISE/Nikkei 50 index shed 3.19 to 1,489.05.

Traders said the only activity of note was small-lot, short-term trading. Mr Bill Wilder, director of research at Schroder Securities, said domestic institutions were uncertain of the central bank's interest rate scenario due to the weak yen. "The market could be in the doldrums for another three weeks, since the earliest possibility of a discount rate cut will be mid-May," he added.

The smaller markets, which attracted investors looking for quick profits last week, retreated on profit-taking. The second section slipped 8.76 to 3,396.12 and the over-the-counter market fell 30.53 to 3,065.53.

Interest rate-sensitive issues also declined on profit-taking, with Nippon Steel shedding Y9 to Y471. Nippon Telegraph and Telephone lost Y19,000 to Y991,000, falling below the important Y1m level for the first time since February 15.

Mitsubishi Heavy Industries receded Y12 to Y771 on reports that it had decided to write off Y30bn worth of bills receivable that are due from Iraq. Chiyoda, the plant engineer, dipped Y30 to Y3,030 on profit-taking after rising for the last three days.

Nihon Nohyaku, an agro-chemical manufacturer, rose Y70 to Y2,320 in heavy trading. Some investors were attracted by rumours that speculative buying has boosted the issue recently. Demand spread throughout the sector, with Kumiai Chemical adding Y40 at Y1,200 and Hokko Chemical Y50 at Y1,240.

Securities houses weakened on concern that poor market conditions would affect earnings. Daiwa Securities fell Y60 to Y1,350 and Nomura Securities Y30 to Y2,140.

The land transportation sector was the worst performer of the day, losing 4.03 per cent. Traders attributed the weakness to the decline of Seino Transport, which retreated Y150 to Y2,250 on selling by foreigners.

Medical equipment makers improved on reports of new requirements stipulating that ambulances would have to carry electro-cardiographic equipment. Nihon Kohden gained Y10 to Y1,430.

Iwasaki Electronics, a lamp maker, gained ground in the morning on reports that it has developed an ultra-violet ray lamp which decomposes harmful substances in pesticides used on golf courses, but closed unchanged at Y1,260 on profit-taking.

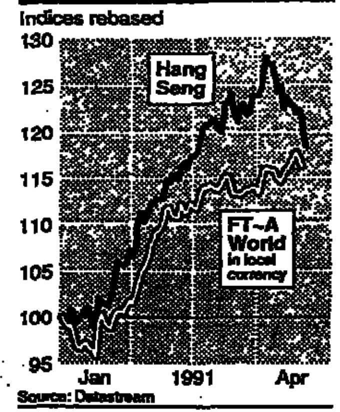
In Osaka, the OSE average fell 342.44 to 29,557.25 on volume of 21.4m shares, down from Friday's 33.7m.

Roundup

A MIXED DAY for equities in the region emphasised the old saying that what goes up must come down, with Hong Kong and Manila as the illustrations.

HONG KONG lost 2.3 per cent in heavy trading, but the 84.91 fall to 3,582.49 in the Hang Seng index, its lowest close in seven weeks, still left it nearly 45 points above the day's low of 3,538. Turnover rose from HK$1.22bn to HK$1.41bn.

Dealers said London institutions were taking profits on currency, as well as on the market. The Hong Kong dollar is pegged to the ascending US dollar; but support for the Hang Seng was lost after Mr Douglas Hurd, the British foreign secretary, failed to secure an agreement from China on the colony's HK$100bn international airport plan earlier this month.



Source: Datastream

MANILA's downswing accelerated with a drop of 4.1 per cent, the composite index sliding 44.38 to 1,027.12. Some observers blamed last week's Supreme Court ruling which allowed industrialist Mr Eduardo Cojuangco, a close associate of the late Philippines president Ferdinand Marcos, to vote his sequestered shares in San Miguel, the brewer and market leader.

Turnover fell from 142.9m pesos to 95.9m. San Miguel declined 5.50 pesos to 52.50.

TAIWAN, in contrast, set a 10-month high in modest trading as an historic political reform package was passed. The weighted index advanced 69.91 or 1.2 per cent to 5,824.00.

The index has climbed 510.69 or 9.6 per cent since last Wednesday. However, turnover continued to dwindle yesterday, falling from T$76.7bn to T$69.7bn.

JAKARTA, which has been criticised for not doing enough to protect investors, tightened disclosure regulations for companies hoping to list on the market. The official index, meanwhile, celebrated its return from a week's holiday by rising 3.07 to 415.55 in heavy volume of 5.83m shares.

Mexico in pole position yet again

By Antonia Sharpe

WALL STREET's historic breach of the 3,000 level changed the direction of the FT-Actuaries World Index last week. Overall, it rose 0.3 per cent in local currency terms. Excluding the US, the world was 0.1 per cent lower.

Japan held the world back in spite of reports in midweek that the central bank was loosening its monetary policy. Speculation of an early cut in interest rates was fanned by last Friday's release of better than expected March money supply figures.

From a technical standpoint the Nikkei average was unable to break decisively through the important 27,000 mark. Without Japan the world index would have risen 0.7 per cent last week.

The best performer of the week and of the year to date was Mexico, which put on 9.5 per cent and 62 per cent respectively in local currency terms. Mr Jeremy Campbell-Lamerton of Baring Securities attributed the advance to unabated buying of shares in Telmex, the telephone monopoly and a rise in foreign investment on optimism that the Free Trade Agreement between the US and Mexico will succeed.

The government is due to make an international offering of its remaining Telmex shares next week, expected to raise over $2bn. Telmex has risen over 50 per cent to over $3 in the last month and now accounts for one-fifth of average daily market volume of $32m. However, it showed signs of tiring last Friday, which could herald a much-needed rest for the market, Mr Campbell-Lamerton says.

Interest rates continued to steer most stock markets last week. Hopes of an early cut boosted Australia 5.1 per cent and New Zealand 4.4 per cent in local currency terms, while receding hopes of a reduction cost France a fall of 1.5 per cent and rising domestic rates left Sweden 2.2 per cent lower.

Hong Kong lost 1.7 per cent on worries about the new airport project following the stalemate in negotiations between the UK and China.

MARKETS IN PERSPECTIVE

	% change in local currency †				% change sterling †	% change in US $ †
	1 Week	4 Weeks	1 Year	Start of 1991	Start of 1991	Start of 1991
Austria	+1.41	+8.09	-23.08	+19.81	+17.08	+4.47
Belgium	+0.79	+2.83	-3.99	+20.64	+18.05	+5.32
Denmark	+0.44	+1.63	+0.23	+17.45	+14.49	+2.16
Finland	-2.63	-0.51	-11.94	+26.82	+28.01	+14.21
France	-1.47	+1.10	-15.05	+17.65	+14.52	+2.19
Germany	+1.05	+5.20	-14.83	+13.01	+9.10	-2.66
Ireland	+1.27	-1.40	-11.34	+24.84	+21.41	+8.33
Italy	+1.40	+3.47	-18.09	+17.07	+15.44	+3.01
Netherlands	+1.55	+5.97	+2.43	+20.22	+16.16	+3.65
Norway	+0.22	+0.61	-14.12	+6.81	+4.40	-6.85
Spain	+0.45	+1.59	+4.51	+25.49	+25.89	+12.32
Sweden	-2.18	-2.38	-1.42	+24.31	+26.65	+13.00
Switzerland	-0.73	+3.58	+1.09	+20.47	+17.07	+4.46
UK	-0.23	+2.80	+14.21	+18.09	+18.09	+5.37
EUROPE	+0.03	+3.06	-0.72	+17.88	+16.23	+3.69
Australia	+5.10	+6.40	+4.64	+19.76	+34.59	+20.09
Hong Kong	-1.66	-0.30	+18.45	+23.29	+38.32	+23.41
Japan	-0.44	+0.20	-10.17	+14.45	+25.77	+12.21
Malaysia	+2.47	+0.69	+12.04	+14.25	+25.93	+[illegible].36
New Zealand	+4.36	+14.27	-20.94	+14.74	+28.85	+[illegible].95
Singapore	+5.07	+3.69	+1.33	+30.22	+42.91	+27.51
Canada	-0.04	+0.98	+2.66	+5.44	+18.73	+5.94
USA	+1.06	+4.71	+14.00	+16.90	+31.01	+16.90
Mexico	+9.52	+30.61	+142.31	+61.89	+78.60	+59.35
South Africa	+0.35	+2.16	-7.70	+8.80	+24.86	+11.40
WORLD INDEX	+0.33	+2.70	+1.17	+16.26	+25.28	+11.78

† Based on April 19th 1991. Copyright, The Financial Times Limited, Goldman, Sachs & Co., and County NatWest Securities Ltd

FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Limited, Goldman, Sachs & Co., and County NatWest/Wood Mackenzie in conjunction with the Institute of Actuaries and the Faculty of Actuaries

NATIONAL AND REGIONAL MARKETS	FRIDAY APRIL 19 1991								THURSDAY APRIL 18 1991					DOLLAR INDEX		
Figures in parentheses show number of lines of stock	US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Local % chg on day	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	1991 High	1991 Low	Year ago (approx)
Australia (74)	141.77	+0.1	122.06	123.98	127.95	121.92	+0.7	5.58	141.57	118.45	122.33	124.24	121.09	141.77	112.74	134.57
Austria (19)	205.42	−2.3	176.86	179.65	185.40	183.28	−0.4	1.44	210.17	175.85	181.62	184.45	184.10	222.37	167.00	271.89
Belgium (60)	139.26	−2.4	119.90	121.78	125.69	121.75	+0.2	4.91	142.63	119.34	123.24	125.17	121.53	151.20	121.73	147.77
Canada (116)	137.75	−1.3	118.60	120.46	124.32	115.21	−1.1	3.43	139.52	116.74	120.56	122.43	116.44	141.10	126.49	131.44
Denmark (31)	237.65	−2.8	204.61	207.84	214.49	214.70	+0.2	1.58	244.45	204.52	211.23	214.52	214.36	270.58	217.74	248.32
Finland (21)	117.80	−3.5	101.42	103.03	106.32	99.50	−1.5	2.44	122.05	102.12	105.47	107.11	101.01	125.15	90.61	133.64
France (112)	134.63	−3.6	115.91	117.73	121.50	123.70	−1.0	3.50	139.71	116.89	120.71	122.59	124.91	152.28	121.85	165.91
Germany (68)	108.92	−3.6	93.78	95.27	98.30	98.30	−0.8	2.28	112.97	94.52	97.63	99.14	99.14	125.35	102.43	132.34
Hong Kong (46)	150.33	−0.8	129.43	131.47	135.69	150.38	−0.8	4.54	151.57	126.82	130.97	133.02	151.57	156.75	119.62	126.86
Ireland (16)	160.83	−4.2	138.47	140.65	145.16	146.92	−1.5	3.11	167.96	140.53	145.14	147.40	149.22	182.46	132.88	187.54
Italy (91)	80.67	−2.2	69.45	70.54	72.80	77.23	+0.3	3.30	82.48	69.01	71.26	72.38	76.96	88.23	72.05	101.65
Japan (452)	140.01	−1.9	120.54	122.44	126.38	122.44	−0.8	0.70	142.78	119.46	123.38	125.32	123.38	146.97	118.35	136.67
Malaysia (33)	238.35	−0.4	205.22	208.44	215.12	252.12	+0.0	3.00	239.34	200.25	206.80	210.03	252.06	247.78	192.83	213.51
Mexico (12)	931.33	+1.0	801.85	814.48	840.57	3054.82	+1.1	0.22	921.70	771.16	796.44	808.87	3021.19	931.33	534.45	411.51
Netherland (40)	138.86	−2.9	119.55	121.44	125.33	123.97	−0.1	4.20	143.07	119.70	123.63	125.56	124.07	145.73	125.70	139.76
New Zealand (14)	49.90	−1.3	42.96	43.64	45.03	44.99	−1.0	7.59	50.56	42.30	43.69	44.37	45.44	52.31	41.18	63.18
Norway (30)	190.28	−3.7	163.83	166.41	171.74	174.14	−0.8	1.73	197.49	165.24	170.66	173.32	175.51	223.24	182.24	227.33
Singapore (25)	203.09	+0.0	174.85	177.61	183.29	166.16	+1.0	2.02	203.12	169.95	175.52	178.25	164.46	208.25	151.63	187.99
South Africa (60)	203.74	−1.5	175.41	178.17	183.88	148.20	−0.8	3.82	206.93	173.13	178.81	181.59	149.04	208.54	173.00	184.26
Spain (41)	157.61	−2.9	135.70	137.84	142.25	127.46	−0.5	4.42	162.26	135.75	140.21	142.39	128.14	171.12	131.51	153.75
Sweden (27)	180.18	−3.2	155.13	157.58	162.63	165.05	−1.2	2.64	186.17	155.76	160.87	163.38	167.08	204.12	146.60	187.07
Switzerland (65)	92.90	−1.9	79.98	81.25	83.88	84.69	+0.1	2.46	94.70	79.24	81.84	83.12	84.63	100.67	82.17	90.73
United Kingdom (295)	174.56	−3.5	150.29	152.65	157.54	150.29	−0.7	4.72	180.88	151.34	156.28	158.72	151.34	187.44	158.27	145.31
USA (524)	155.84	−1.1	134.17	136.29	140.65	155.84	−1.1	3.13	157.52	131.79	136.12	138.24	157.52	158.24	125.95	135.58
Europe (936)	139.50	−3.3	120.11	122.00	125.91	123.03	−0.6	3.84	144.20	120.64	124.60	126.55	123.75	151.52	125.50	140.18
Nordic (109)	177.25	−3.1	152.60	155.01	159.97	155.03	−0.8	2.08	182.92	153.05	158.07	160.53	156.00	200.81	155.55	189.48
Pacific Basin (646)	140.12	−1.8	120.64	122.54	126.47	123.02	−0.7	1.04	142.71	119.40	123.32	125.24	123.88	145.92	117.86	136.15
Euro−Pacific (1582)	140.21	−2.4	120.72	122.61	126.54	123.90	−0.6	2.19	143.67	120.21	124.14	126.08	124.70	147.66	121.29	138.14
North America (640)	154.64	−1.1	133.14	135.25	139.59	153.09	−1.1	3.15	156.33	130.79	135.10	137.21	154.75	157.04	125.91	135.24
Europe Ex. UK (641)	118.33	−3.1	101.87	103.50	106.82	107.10	−0.5	3.16	122.07	102.13	105.50	107.15	107.63	129.80	106.85	135.06
Pacific Ex. Japan (194)	140.50	−0.3	120.96	122.89	126.82	125.74	+0.1	4.88	140.90	117.88	121.77	123.66	125.59	140.90	111.40	129.32
World Ex. US (1770)	141.22	−2.3	121.59	123.51	127.46	124.52	−0.6	2.24	144.61	121.00	124.97	126.92	125.33	148.16	122.32	138.52
World Ex. UK (1999)	142.23	−1.7	122.46	124.39	128.38	132.64	−0.8	2.30	144.67	121.04	125.01	126.97	133.73	145.77	120.08	135.56
World Ex. So. Af. (2234)	144.74	−1.9	124.61	126.59	130.64	134.29	−0.8	2.55	147.52	123.43	127.48	129.47	135.38	148.65	122.92	136.12
World Ex. Japan (1842)	149.17	−1.9	128.43	130.47	134.65	140.72	−0.8	3.47	151.99	127.16	131.34	133.40	141.88	152.83	126.69	137.66
The World Index (2294)	145.09	−1.9	124.92	126.89	130.98	134.39	−0.8	2.57	147.88	123.73	127.79	129.78	135.48	149.01	123.28	136.41

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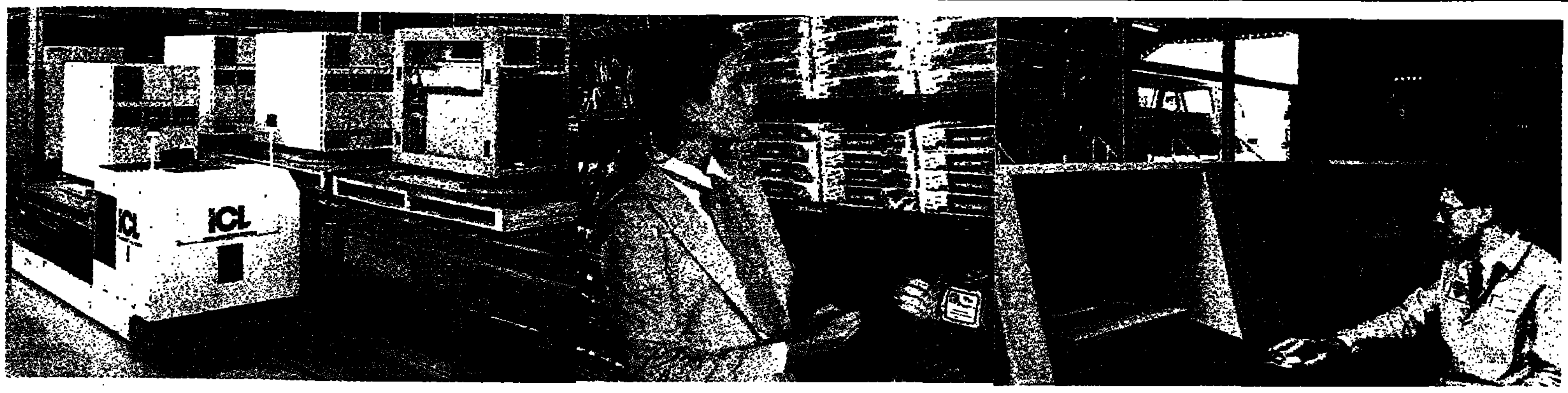
FINANCIAL TIMES SURVEY

THE COMPUTER INDUSTRY

SECTION III

Tuesday April 23 1991



Facets of modern computing: automated workstation manufacture at ICL (left), stock recording (centre) and computerised paint-spraying at General Motors

The effects of recent changes in the computer industry have been shattering for many companies. Almost every mainframe or minicomputer manufacturer in the US and Europe is demonstrating declining profitability, if not actual losses. **Alan Cane** reports

On the brink of disaster

THE WORLD'S large computer manufacturers have become used to rehearsing the superficial reasons for the present crisis in the information technology business, a malaise which has brought many of the best-known names in data processing to the brink of disaster.

These *include:*

● The spread of open systems, computer networks based on standard industry components which cannot command the gross profit margins inherent in proprietary designs. The gross margin built into a mainframe computer sale can be 70 per cent or more; for PCs and workstations, it can be less *than 30 per cent.*

● A seemingly never-ending decline in the cost and growth in the power of data processing equipment which has further squeezed manufacturer's margins. A high performance workstation can cost less than \$1,000 for every million instructions per second (mips) of computer power. Mainframes typically cost more than \$100,000 per mips. For many, but not all, tasks it is possible to substitute low cost workstation power for mainframe power.

● The growing importance of service suppliers and systems integrators who put together hardware and software from disparate sources to satisfy their customers' requirements. New competitors for the traditional industry as a result of this change include management consultancies such Anderson Consulting and Price Waterhouse as well as software houses and value added resellers.

● A slackening in demand for computer systems which has been apparent in the US for some time and is becoming evident in Europe. The reasons are complex; they include saturation in some areas of the market, dissatisfaction with the results of continued computerisation and, in the UK at least, high interest rates.

The effects of these changes *have been shattering for many* companies. In the US, Unisys, the result of a merger between Sperry and Burroughs only five years old, lost \$436.7m in 1990 and suspended payment of dividends on both its common and preferred stock in an attempt to reduce debt which stood at \$3.7bn at the end of that year.

In Europe, Groupe Bull, the French state-owned manufacturer announced a loss of £700m for 1990 and said the French government had agreed to provide £400m in capital support to the company over 1991-92 in addition to £270m earmarked for research and development into Bull's open systems designs.

Unisys and Bull are simply the most spectacular victims of the sickness affecting the industry; almost every mainframe or minicomputer company in the US and Europe is demonstrating declining profitability if not actual losses.

Earnings per share at IBM, the world's largest computer company, for example, have been on a plateau for six years now. The company has spent more time and money than most over the past three years in attempting to bring its expenses into line with sales, but earlier this month it shook the stock market with a warning that its sales in the first *quarter of 1991 would be significantly* weaker than expected; Wall Street analysts were downcast after the company's apparently strong recovery in 1990.

The key to what is happening is the uneven nature of the picture. Suppliers of PCs, workstations and high powered small systems have not been damaged to anything like the same extent as mainframe and minicomputer manufacturers.

● Compaq Computer, for example, the world leader in high powered PCs reported sales in 1990 of \$3.6bn, up 25 per cent from 1989, while net income was \$455m, up from \$333m the previous year. Its growth was chiefly driven by international sales, up 54 per cent, while revenues grew only 5 per cent in the US.

● Apple Computer, a PC pioneer which has tended to go its own way in technological development, had comparatively stagnant sales and earnings in 1990, but began a spectacular turnaround after the launch of new, aggressively priced computers featuring its proprietary "Macintosh" technology.

● Pyramid Technology of the US which makes high performance mid-range computers using the "Unix" operating system increased revenues by 93 per cent last year and its pre-*tax profits by 110 per cent. The* Pyramid machines are colloquially described as "Unix hot boxes"; for prices between £34,000 and £500,000, they will outperform a mainframe. Other hot box suppliers include Arix and Sequent.

● New players are entering the industry, often from unexpected directions. Nippon Steel, for example, the world's largest steelmaking concern has developed notebook computers which it is marketing in the US and Europe as part of a broad plan to diversify into computers and communications.

All of this is evidence that the traditional computer business is being displaced by a new industry, with which it has little in common, as surely as the traditional Swiss watch-ing making industry was brushed aside by Japanese electronic timepiece manufacturers.

This new computer industry has its origin not in traditional data processing but in the semiconductor industry and its expression in PCs and workstations.

The traditional industry is characterised by proprietary computer designs which lock customers into individual suppliers; prices are set to yield high gross profit margins which are used to finance sub*stantial direct sales forces.* These are the primary conduits between the manufacturer and the customer. Applications software is developed chiefly by the customer's own software staff, perhaps with the help of a software house.

The new industry is very different. Machine designs are similar between suppliers because they are based on widely available, industry standard microprocessors. Most of the research and development work has been carried out by the semiconductor manufacturer. Compaq, for example, spends about half the industry average on research and development.

Because margins are so narrow, direct sales forces are economically unviable and sales take place principally through "channels" – dealers, software houses, value added resellers and systems integrators. The key to success, as in the case of Compaq, is a strong positive relationship with the channel.

Operating software is standard – usually a variation of the Unix system. Applications software is packaged, developed by software specialists who prefer to write programs which will run on a wide variety of machines rather than tie themselves to a single manufacturer.

The question, therefore, is whether the members of the old industry are sufficiently flexible to become new industry players, or whether they are doomed to extinction. Against this background, arguments about the value of state aid to national champions appear increasingly redundant.

At present, most experts agree that only IBM is safe; it has the determination, flexibility and, most important, the financial security to change course decisively.

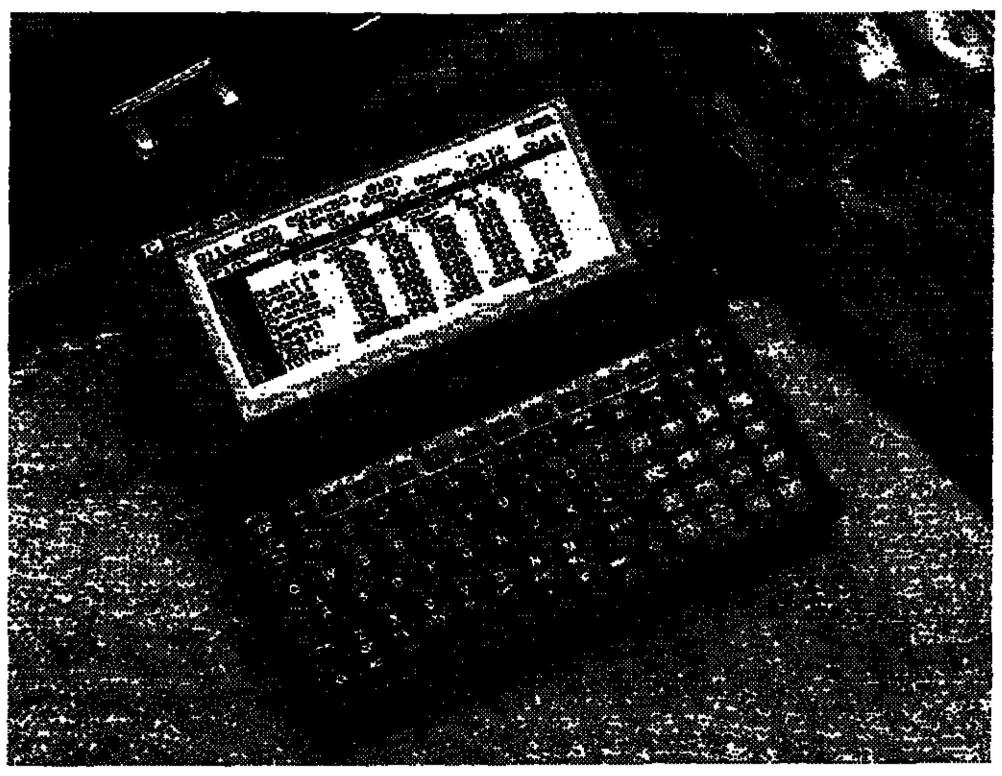
The future of the Japanese mainframe manufacturers, Fujitsu, Hitachi and NEC, IBM's chief competitors is unclear. They continue to prosper in their fast growing home market, but have yet to face the challenge of open systems and networked computing which is causing their Western competitors so much heartache.

Swiss watchmakers found salvation in fashion. An equivalent safe haven for the traditional computer industry is not yet in sight.

IN THIS SURVEY

Editorial production: Phillip Halliday

■ THE VIEW FROM THE US: **Louis Kehoe** in San Francisco assesses changing market strategies and unveils a palmtop



Palmtop has the punch of a PC

HEWLETT-PACKARD'S palmtop computer, introduced today, is the size of a cheque book and weighs just 11 ounces but the HP 95LX packs all of the punch of an IBM-compatible personal computer.

Built into the HP pocket-sized computer is Lotus 1-2-3, the most popular spreadsheet program.

In addition, a phone book and appointments calendar comes installed into the HP palmtop. Further programs can be loaded by inserting solid-state memory cards. A plug-in demodulator unit enables the HP 95LX to receive text messages from cellular paging systems.

It is aimed at technical and scientific users of its desktop PCs, and offers the power of a machine 10 times its size.

ON-LINE TRANSACTION PROCESSING

Technology advance drives sales growth

ON-LINE transaction processing has grown to encompass a full third of world computer market since its beginnings in airline reservation systems and banking.

These interactive computer systems serve in a growing range of business applications, from production management to customer service. With sales last year of approximately $40bn worldwide, OLTP is growing at an annual rate of about 20 per cent and will be a $72bn market by 1994, according to market analysts.

Growth in the OLTP market is being driven by its broadening use in telecommunications, manufacturing and retail industries, which have become big users of OLTP. Technology advances in parallel processing and microprocessor performance have downsized OLTP, creating applications and making this mode of computing available to small and medium-sized businesses as well as large corporations.

Digital Equipment's OLTP revenues grew by some 35 per cent to $2.1bn in 1990

OLTP has been impacted by the trend toward open systems based upon the Unix operating system. Unix-based OLTP will grow to between $18bn and $21bn by 1994, according to Dataquest, the market research company.

The emergence of relational database management systems software has been a driving force in the growth of OLTP. These programs, which enable users to access information wherever it resides in a database, have become the basis for a broad range of business applications running on OLTP systems.

"Fault tolerant", or "high availability" computers represent an important segment of the OLTP market. As businesses entrust their most critical functions to computer systems, the reliability of the systems and their ability to continue functioning through power failures, component failures, software updates and all manner of events that can bring the average computer to its knees has become vital.

Traditionally, OLTP systems have been based upon mainframe computers with International Business Machines claiming the lion's share of the market. IBM holds an estimated 55 per cent share of the OLTP market, largely based upon its dominant role in mainframe computers. While IBM is expected to remain the market leader, its share of the OLTP market will decline, according to industry analysts, as microprocessor-based parallel processing systems – many of them running the Unix operating system – displace traditional mainframes.

Tandem Computers, pioneered the "fault tolerant" computer market selling its proprietary computers to banks and securities companies. Lower spending in the financial services industries have hurt Tandem's earnings over the past year but with 1990 revenues of $506.1bn the company remains the market leader in fault-tolerant computers.

Last year, Tandem introduced its first open systems products, offering a range of Unix computers based upon Mips Computers Reduced Instruction Set Computer (RISC) chips. In addition to selling its Unix computers direct to end users, Tandem signed an agreement with AT&T under which the telecommunications and computing company will resell the Tandem products.

Biting at the heels of IBM and Tandem are a new generation of specialist OLTP computer companies led by Stratus Computer, Sequent Computer Systems and Pyramid Technology. Stratus specialises in what it terms "critical on-line computing" or high availability computing for mission critical applications.

Stratus's stronghold is in the financial services industry where it provides systems for stock trading, automatic teller networks and credit card authorisation. Stratus is, however, expanding its customer base in other fields such as retailing, manufacturing and telecommunications.

Stratus recently launched a new product line based upon Intel's 860 Reduced Instruction Set Computing (RISC) microprocessor, following a trend toward the use of high performance RISC processors in OLTP. The company is also making a transition from a proprietary operating system to open systems based upon the Unix operating system.

Some 20 per cent of Stratus's $404m 1990 revenues came via IBM, which sells Stratus computers on an OEM basis. Over the past year, however, Stratus's business with IBM has flattened as IBM increasingly targets "mission critical" applications with its own computers.

Stratus expects to expand its direct sales to more than compensate for the IBM shortfall. The company is in particular targeting the emerging market for computers to control "intelligent networks" as deregulated telephone companies offer new services such as store and forward facsimile, free-phone numbers and voice messaging services.

Unix-based OLTP will grow to between $18bn and $21bn by 1994, says Dataquest

Sequent Computer Systems' products, based upon the Intel line of microprocessors running a version of the Unix operating system, demonstrate the price and performance advantages that microprocessor-based parallel processing has over traditional mainframes.

Sequent's Symmetry 2000 family of computers, introduced in January, incorporates up to 30 of Intel's latest 486 microprocessors and achieves mainframe class performance at what the company claims is an 80 per cent price/performance advantage over other Unix mainframe computers and an even greater edge over traditional proprietary mainframes.

The 8-year-old Sequent, with 1990 revenues of $249m, has built its business upon automating applications that cannot be cost-effectively handled by a mainframe computer. Examples range from a currency management system for British Airways to an emergency room scheduling system for a California hospital.

Pyramid Technology, another OLTP specialist, achieved a remarkable 73 per cent growth in revenues in fiscal 1990, to reach $180m for the year ending last September. Pyramid, of the Silicon Valley, is about to launch a range of products based upon Mips Computer's RISC microprocessors.

World OLTP sales last year reached $40bn and are growing at 20 per cent annually

While the niche players of the OLTP market are making inroads, the big companies of the computer industry are not standing still. Unisys, traditionally a large supplier of mainframe-based OLTP and also a re-seller of Sequent computers, last week unveiled hardware and software products that establish its strategic direction toward open-systems based OLTP.

Unisys expanded its product line with mid-range systems, which it will manufacture in-house. Based on the Intel 486 with up to five processors, the new Unisys 6000/65 has a peak performance of 118 MIPs and will run the latest version of AT&T's Unix, System V.4.

Unisys also unveiled new Unix OLTP software including an improved version of AT&T's "transaction manager" which will improve performance and reliability, the company claims.

Digital Equipment's OLTP revenues grew by approximately 35 per cent to $2.1bn in 1990, according to analysts at Hambrecht & Quist, the San Francisco investment bank.

Digital is emphasising fault tolerance. DEC launched its first specifically fault-tolerant computers early last year but according to industry analysts the products failed to have a significant impact on the market.

Last month, DEC unveiled its second generation fault tolerant products – a new range of aggressively-priced VAX minicomputers designed for mission critical applications which analysts predict will do much better. Hewlett-Packard is also taking a stab at the fail-safe computer market through an investment in Sequoia Systems, a small manufacturer of fault-tolerant computers.

HP will resell Sequoia's machines and gain access to its technology. As competition mounts, the OLTP market will become increasingly segmented, analysts predict. Increasingly, the ability to perform OLTP will become a prerequisite of commercial computing systems or all sizes.

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New generation challenges leaders

THE US computer industry is in the midst of a broad restructuring driven by technology advances that have changed the economics of computer manufacturing.

Some of the largest companies in the industry are being forced to make painful adjustments, while a new generation of computer makers is growing rapidly. Making these changes more difficult for all computer companies are the triple troubles of a recessionary domestic economy, European economic ills and the interruption of normal purchasing patterns created by the Gulf War.

The effects of these problems are being keenly felt by many US computer companies, creating an industry downturn in which revenue growth has been stalled and earnings are expected to decline in the short term. While these economic problems are expected to be short lived, the fundamental changes under way in computer technology could reshape the industry in the 1990s, analysts predict.

The most important technology trend is the rising power of the microprocessor – the "computer on a chip". The initial impact of the microprocessor was to create the personal computer, spawning a new generation of computer companies in the 1980s such as Apple Computer, which has annual revenues of $5.5bn, and Compaq Computer with $3.6bn.

Networking technology, which enables large numbers of PCs to be tied together so that they can share data, transformed the PC from a stand-alone single user machine into an important element of office automation systems.

The PC has had a large impact upon the way computers are used in offices. They have greatly expanded the use of desktop computers and to a significant extent displaced the minicomputer and computer terminals as standard office automation equipment. The computer workstation, also based upon microprocessors, has had a similar impact upon the technical computing field.

Engineering workstations running computer-aided design programs, for example, have usurped the role of mid-range computers in thousands of laboratories and product development departments. Sun Microsystems, the workstation market leader, has established a $2.5bn market for high-powered desktop computers based upon Reduced Instruction Set Computing (RISC) microprocessors, largely at the expense of traditional computer companies such as Digital Equipment and Hewlett-Packard.

However, the inroads of the microprocessor have just begun. High-powered computer systems that rival the system performance of mainframes and minicomputers are being built using multiple microprocessors. Companies such as Sequent Computer can offer mainframe-class computers built around Intel microprocessors at a fraction of the cost of IBM mainframes.

Stratus Computer Systems is challenging IBM and Tandem Computers in the market for fault tolerant computers for mission critical applications using computers built around Motorola and MIPS Computers microprocessors. This phenomenon, known as downsizing, has had an impact on the entire computer industry.

"The microprocessor has turned hardware computer economics upside down," says Mr Steven Milunovich of Solomon Brothers, in a recent report on the discontinuities in the computer industry. "Multiprocessor systems will directly threaten mainframe and minicomputer solutions," he says.

"Relational data bases can transform data into information. Object-oriented programming will reduce the applications backlogs that plague every level of computing. And sophisticated networks will allow users to access data seamlessly across the enterprise. Those vendors that can bridge these discontinuities to aid customers in adopting new technologies, while protecting prior investments, will benefit the most," he says. However, hardware is only one side of the computer industry. Software and services are growing faster and have higher profit margins.

Companies such as Electronic Data Systems are riding the wave of the computer services rise, providing computer users with solutions to their increasingly complex information technology needs.

Another driving force behind the reshaping of the computer industry is the trend toward open-systems standards that enable different types and brands of computers to work more efficiently together. With a variety of motives, the vast majority of computer companies are pursuing open systems, with varying degrees of enthusiasm.

For many, open systems represent an opportunity to infiltrate the customer bases of industry leaders such as IBM and Digital Equipment, HP and Unisys. The industry leaders have adopted open systems in part as a defensive move. They view open systems as a means of providing customers with complete solutions to their computing needs.

One of the critical needs of the 1990s among computer users, is to find a way to tie together their inventories of computers, which have typically been acquired in a rather haphazard fashion.

During the 1980s, distributed computing was in vogue. Departments of large corporations frequently installed their own computer networks or systems often with little reference to the corporate data processing centre. Now, companies are trying to tie these computers together to create enterprise-wide networks.

Enthusiasm for open systems and the trend toward lower-cost computer power leads some to conclude that the large US computer hardware companies are dinosaurs. This is to ignore several factors. While the mainframe computer is challenged by new technologies, it remains a dominant sector of the computer industry providing, for example, about half of IBM's $69bn annual revenues.

Open systems, based upon the Unix operating system, are certainly becoming more popular, but they represent only 12 per cent of annual computer sales. The ability of established industry leaders to adjust to rapid changes in the computer industry is frequently brought into question, but IBM is turning itself slowly but surely to address the issues of the computer market head on.

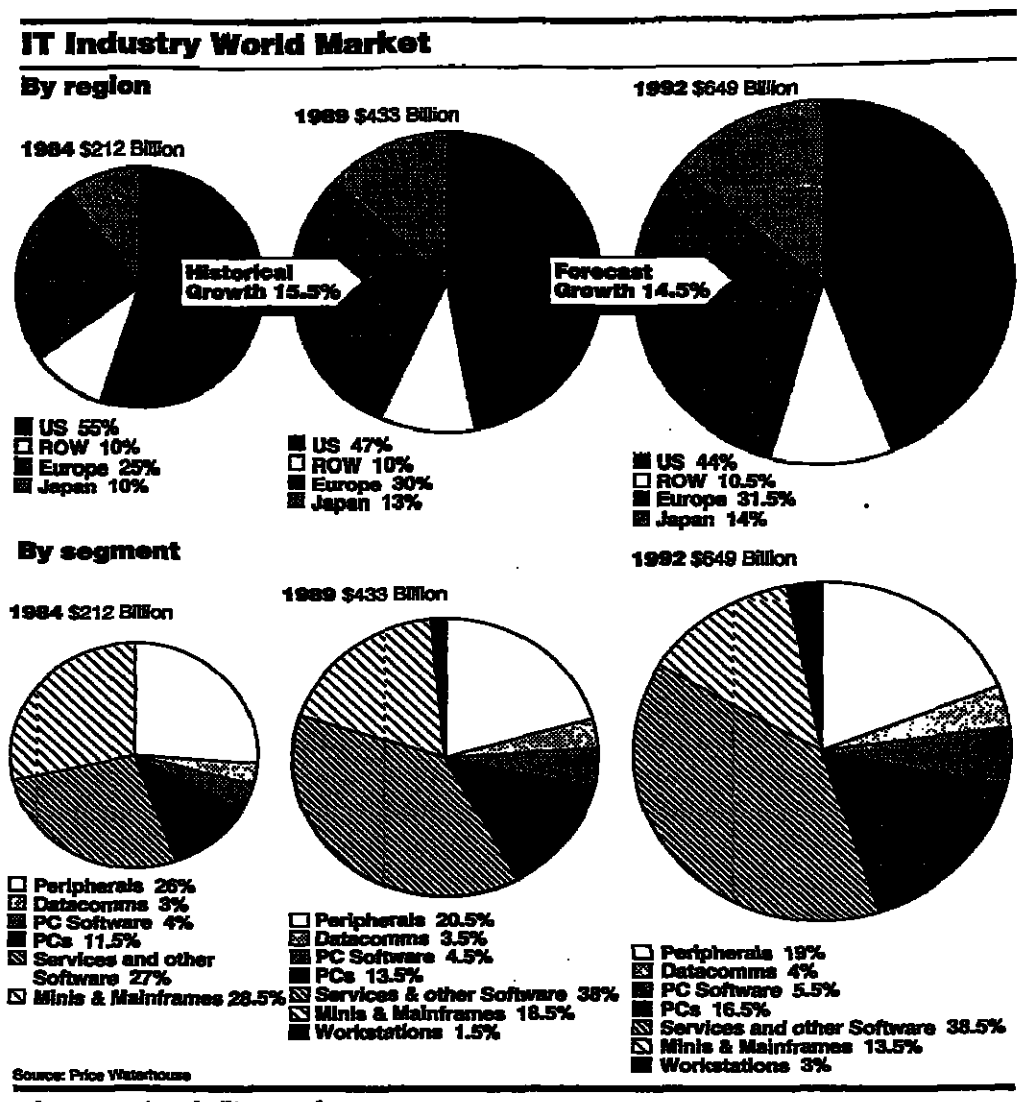
IBM is focusing upon solution selling, reorganising its business units to more directly address the problems of its customers. Perhaps the best measure of IBM's success comes from the large systems integrators, who regard IBM as a direct competitor.

IBM has long been the market leader in the PC sector, which it quickly recognised as a big new market opportunity in the early 1980s. In the computer workstation market, IBM has made a late, but remarkably successful entry. Last year, the company sold $1bn-worth of its RS/60000 workstations, leaping from nowhere to become the fifth largest workstation supplier. This year, IBM is expected to climb to number two or three in the workstation market and by 1993 will be neck and neck with Sun Microsystems, the market leader, according to industry analysts.

Digital Equipment is undergoing a painful metamorphosis. After suffering a period of internal strife between supporters of open systems and traditionalists, Digital is putting together a coherent strategy. Digital maintains that open systems must incorporate proprietary software if the promise of the open systems movement – inter-operability among dissimilar computers – is to be fulfilled.

Standard proprietary systems which adhere to standards that allow inter-operability, represent the way of the future, many in the industry believe. Computers such as Digital's VAX would retain their distinct features, but acquire the ability to work with other types or brands of computers. HP, the third largest US computer company, has overhauled its computer product line to take advantage of microprocessor power and to respond to the open systems trend.

Similarly, NCR and Data General have developed aggressive open systems strategies. Unisys, in spite of financial woes, is pursuing open systems. It is too soon to count out the US computer industry leaders of the 1970s, but it seems certain that they will be forced to concede a bigger share of the market to the companies that emerged in the 1980s.



Source: Price Waterhouse

Leading worldwide computer companies 1984 vs 1989 ($bn)

1984	Data proc. revenues	1989	Data proc. revenues	Change in rank
IBM	42.6	IBM	57.3	–
DEC	6.3	DEC	12.9	–
Burroughs	4.5	Fujitsu	12.3	+2
Sperry	4.0	NEC	11.5	+5
Fujitsu	3.7	Unisys	9.3	−2
Control Data	3.7	Hitachi	9.3	+6
NCR	3.6	HP	8.2	+1
HP	3.4	Groupe Bull	6.5	+9
NEC	3.3	Apple	5.4	+5
Siemens	2.8	NCR	5.2	−3
Wang	2.4	Olivetti	4.9	+2
Hitachi	2.2	Siemens	4.7	−2
Olivetti	2.1	Toshiba	4.6	+12
Apple	1.9	Compaq	2.9	New
Honeywell	1.8	Matsushita	2.8	New
ICL	1.6	Philips	2.8	+3
Groupe Bull	1.6	Nixdorf	2.8	+6
Data Gen.	1.3	Wang	2.7	−7
Philips	1.2	ICL	2.7	−3
Commodore	1.2	EDS	2.4	New
TRW	1.2	Canon	2.3	New
Xerox	1.2	Xerox	2.2	–
Nixdorf	1.2	TRW	2.1	−2
LM Ericsson	1.1	Amdahl	2.1	New
Toshiba	1.1	Sun	2.1	New

Source: Datamation; McKinsey analysis

MOBILE COMPUTERS

Lightweights that buck the trend

SINCE the early 1980s, when the desktop personal computer was still in its infancy, there have been numerous attempts to create "portable" versions of PCs. Only recently, however, have semiconductor, data storage and display technology advanced to the point where a fully-functional PC can be packaged in a compact, lightweight, carry-along unit.

These technology advances are creating an increase in sales of laptop, notebook and pocket computers, with worldwide sales expected to top $8bn this year.

The market for mobile computers has become one of the fastest growing sectors of the computer business. The increase in mobile computer sales comes as sales of desktop personal computers are beginning to sag, particularly in the US.

By the mid-1990s, portable computers will represent close to 50 per cent of all types of PCs sold, market analysts predict. In Japan, laptop computers account for over 40 per cent of all PC sales. In Tokyo's crowded offices the smaller laptop computers are widely used on the desktop.

Europe is also caught up in the mobile computer revolution with unit sales expected to rise by over 30 per cent this year. Spurring much of this growth is the new category of notebook computers – battery-powered machines that are small enough to fit in a briefcase and weigh 8 lbs or less.

More than 840,000 notebook computers were sold in the US in 1990, according to International Data, a research company. It predicts that sales could rise to 1.4m units in 1991 and rise to 6.2m by the middle of the decade.

The US portable computer market has so far been dominated by Compaq Computer and Tandy of the US, the Zenith DataSystems division of France's Groupe Bull, and Japanese makers Toshiba and NEC.

However, over the past year, as many as 40 computer companies have announced new portable computers.

Many have yet to deliver these products with delays blamed on shortages of displays, disk-drives and microprocessors. Also entering the portable computer fray are some of the largest US and European computer manufacturers.

International Business Machines recently unveiled its notebook computer in its third attempt to find a place in the portable computer market. The IBM Personal System/2 L40 SX notebook computer is slightly larger and heavier than most products in this category, but it is designed to provide the full functionality of the current generation of desktop computers, whereas many notebook computers compromise performance to achieve lower weight and price.

The IBM notebook features a full-size keyboard virtually identical to that found on IBM's PS/2 desktop PCs; a standard memory of two megabytes and maximum memory of 18 MB; a 60 MB hard drive and a 10-inch Video Graphics Array (VGA) display. All this comes in a 7.7 lb package priced in the US at $6,000.

The recent entry of IBM into the notebook computer market, and the anticipated announcement by Apple Computer this year of notebook-sized versions of its Macintosh computers are expected to expand sales rather than to unseat established suppliers.

Digital Equipment, Unisys, NCR and American Telephone & Telegraph are expected to launch mobile computer products this year. Portability still comes at a premium price, with most mobile computers up to 50 per cent more than equivalent desktop machines. Competition is spurring price cuts with some companies such as AST Research offering substantially lower prices on notebook computers.

Technology advances are significantly expanding the capabilities of portable computers.

Flat panel colour displays have recently been introduced by Toshiba and other leading portable makers.

The portable computer of the future will incorporate "wireless communications" according to many industry experts. Last month, NEC of Japan introduced one of the first portable computers with wireless communications. The 6.6 lb laptop computer incorporates a radio transceiver which enables it to send and receive messages without a phone line.

NEC is offering the wireless computer only in Japan. Leading US computer makers also see radio communications becoming an important feature of portable computers in the future.

Apple recently filed a petition with the US Federal Communications Commission (FCC) that, if approved, would let computers transmit and receive information over radio waves instead of through a wired network.

For today's users of portable computers, wireless communications represent a potential solution to the difficulties of hooking portable computers up to telephones. While desktop personal computers that incorporate a model generally have their own phone line, the portable computer must be plugged into a phone in whatever location the user finds himself.

Yet to be resolved is one of the toughest technical challenges of building portable computers – short battery life. Although power-management systems and low-power components have significantly extended computer battery life, battery technology is advancing only slowly, computer makers complain.

A new category of PCs that is beginning to show promise is the hand-held or pocket computer. This market has been pioneered by Poqet Computer of Sunnyvale, California, whose 1.1 lb IBM-compatible PC fits easily into a coat pocket or handbag. The Poqet has been picked up by Infonet, the international value-added network provider, as a portable communications terminal, for sending and receiving electronic mail and other types of messages.

Mr Stav Prodromou, founder and vice-chairman of Poqet, sees pocket-sized computers creating new types of PC applications. These tiny computers are so unobtrusive, he suggests, that they could be used to take notes during a meeting. Their light weight also makes them suitable for use as an electronic appointments calendar or time organiser.

Also about to enter the hand-held computer market is Hewlett-Packard, which this month will introduce a calculator-sized unit with a built-in version of the popular Lotus 1-2-3 spreadsheet.

On the horizon is yet another new type of portable computers known as slate computers. These notebook-sized devices will replace the familiar keyboard with an electronic pen. The user will simply write on the "slate" or point to icons to select functions.

Numerous applications are envisaged for these pen-based computers among people who do much of their work while standing or moving around. Doctors and nurses might use them to update patients' notes or order tests, for example.

Software that enables the computer to interpret hand-written notes has been developed by Go Corporation, a California start-up. Microsoft, the leading supplier of PC software, is also developing handwriting recognition software that could be used as an extension of its existing PC operating systems.

Grid Systems, one of the pioneers of the portable computer market, offers a slate computer with limited handwriting recognition capabilities. IBM and Apple Computer have both expressed great interest in the potential for this new technology. Market researchers at BIS Strategic Decisions predict that sales of slate computers will top $1.5bn by 1995 and could become a $7bn market by the end of the decade.

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■ EUROPE: a crisis that knows no national boundaries

The shift to open systems unlocks sector

A series of stunningly defensive, whole-page advertisements from Groupe Bull in Europe's leading newspapers last month highlights the crisis facing the entire European-owned computer industry. They were used to soften the impact of the announcement of Bull's FFr6.8bn ($1.19bn) loss in 1990.

Most of the leading players are trading at a loss. Those, such as Olivetti, that are still keeping their heads above red ink, are showing greatly reduced profitability. The crisis knows no national boundaries.

● Germany: Siemens-Nixdorf chief executive Mr Hans-Dieter Wiedig warned last month that Europe's largest computer company, formed in 1990 from the ailing Nixdorf Computers and Siemens' computer interests, would not make profits this year as he had hoped, nor was he prepared to say when it would become profitable. The difficulties of assimilating Nixdorf, which had losses of about $686m in its last year as an independent company, have proved far greater than expected.

Comparex, a joint venture between BASF and Siemens selling chiefly mainframes built by Hitachi of Japan, on the other hand, made post-tax profits of DM42m, 31 per cent up on the previous year.

● France: state-owned Bull's loss is thought to be a record for the industry in any one year. It is made up of a FFr3bn operating loss and restructuring charges of about FFr3.8bn. The company is already well advanced with an ambitious programme of corporate changes designed to restore competitiveness and vitality. It includes cutting the number of manufacturing plants from 13 to five, reducing staff by some 5,000 over the year and rationalising research and development and marketing.

● Italy: Olivetti has remained consistently in the black, but its profitability has been falling. Its 1990 turnover is not expected to show much advance on the L9.031bn recorded in 1989 and its profits are expected much below the L202.8bn announced that year. It is in the process of trimming 7,000 jobs from the workforce; manufacturing activities are being rationalised both in Italy and the rest of the world as are direct and indirect distribution networks.

● The Netherlands: Philips is shedding some 50,000 staff worldwide; the resulting restructuring charges forced a loss of Fl 4.2bn last year; the root cause, however, was heavy losses in the information systems division. Now Philips is moving away from computer systems of its own design to those built to industry standards.

● The UK: International Computers, Britain's largest information technology company, while still generating good profits, was bought from STC by Fujitsu last year, leaving the telecommunications company free to concentrate on its core interests.

The deal with Fujitsu came at the end of a series of abortive merger discussions between ICL and several other European-owned computer companies. Apricot Computers, manufacturing arm of the Apricot Group was sold to Mitsubishi Electric of Japan last year.

Wiedig: profits warning

In a surprising reversal of fortune, both ICL and Apricot are now selling UK-designed and manufactured computers in Japan. Smaller manufacturers have been affected by the same malaise.

Norsk Data of Norway and Nokia Data of Finland are going through extensive restructuring and job losses in their attempts to return to profitability.

The plight of Europe computer makers is, to some extent, a reflection of the troubles afflicting every large computer manufacturer worldwide.

Customers, especially governments and the armed forces, are beginning to move rapidly from traditional, mainframe-based data processing systems to so-called "client server systems" where the computing power is supplied by small computers and workstations networked together.

There is growing demand for computers which can easily be connected into client server networks regardless of the manufacturer of origin. Industry standard or open systems are becoming preferred to proprietary designs.

The plight of the European computer makers is, to some extent, a reflection of the troubles that are afflicting every large computer manufacturer in the world

The shift in preference from proprietary designs to open systems took place with remarkable suddenness. It coincided with a rapid, but temporary, softening in many of the European markets. Companies such as Nixdorf which had been gearing up on the back of powerful sales of their proprietary systems suddenly found themselves facing weak markets with systems which were no longer in fashion.

Europe will remain an important IT market though the US will remain dominant. According to figures from the consultancy Price Waterhouse, the world IT market was worth $212bn in 1984; the US held 55 per cent, Europe 25 per cent, Japan 10 per cent with a similar percentage for the rest of the world.

By 1992, according to Price Waterhouse, the overall value of the market will have grown to $649bn.

The US share will have shrunk to 44 per cent, the European share will have grown to 31.5 per cent with Japan and the rest of the world holding 14 per cent and 10.5 per cent respectively.

It seems likely that US and Japanese manufacturers will profit from the growth in the European market, however, rather than the local champions.

There are sharply opposed views on what, if anything, should be done to support European-owned companies. The French government which owns over 70 per cent of Groupe Bull has agreed to support its restructuring measures, but it understands that the company has to find a partner to share the load.

There have been talks between Europe's main players aimed at establishing a single transnational computer company able to rationalise research and development costs and achieve continent-wide economies of scale, but they have all foundered on issue of management and control.

Some, looking at the example of Unisys of the US, question whether putting together failing companies is anything more than a recipe for further failure.

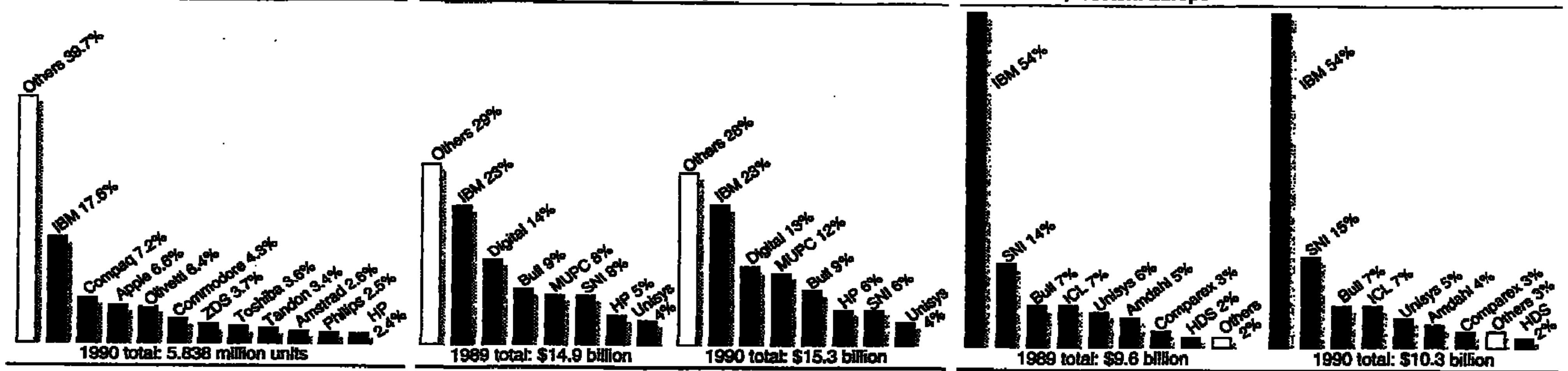
The European commission recently published a fiercely-debated plan to make the electronics industry more competitive based on training, standards, bilateral agreements and collaborative research and development projects. No new money would be involved.

In doing so, it has moved to more of a hands-off approach to encouraging competitiveness than earlier and unsuccessful interventionist strategies.

The fate of ICL within the Fujitsu organisation is being watched closely as an example of the most extreme form of survival measure. It may not be too long before others are forced to follow suit.

Alan Cane

Computer market shares



Graphical User Interfaces

Windows to rooms

SYSTEMS for managing large amounts of information are becoming increasingly important to business computer-users. For example, the concept of overlapping "windows" on computer screens has become popular since its introduction a decade ago.

In the US, the Xerox research centre at Palo Alto unveiled graphical user interfaces (GUIs) 10 years ago to replace command-driven interfaces which tend to restrict the working area of computer screens with control codes.

The easier-to-use window-driven GUIs enable various sources of information and tools to be worked on in separate windows for a single project.

When numerous projects are under way, it can be difficult and time-consuming to shuffle round a clutter of overlapping windows. Now Xerox has developed the "Rooms" concept which takes the graphical user interface into a wholly new dimension.

The system puts all the windows that are relevant for a single task into a separate information workspace (or room), with linking electronic doors that allow users to work on many projects at the same time. The system also allows users to collaborate with different sets of people for each project.

Xerox's graphical user interface has always been object-orientated – unlike many of today's icon-driven interfaces – and is based around a concept of an electronic desktop. The rooms concept is based on research by cognitive psychologists and computer scientists at the Xerox PARC research centre.

"The system is based on the idea that personal computers are fine in their place, but what many workers and planners need to get projects under way is a large table – a place to spread out files and papers for easy access," explains Mr Chris Lindesay, integrated systems manager at Rank Xerox.

The new system allows users to co-ordinate desktops: "With rooms, all you do is walk into your specific project office and you find it just as you last left it, with all your information close at hand," says Mr Lindesay

The concept, which is now at the advanced development stage, allows users to create a suite of rooms which can passed around, copied to disk or loaded on to other workstations. To assist users, an overview room is provided where users can see the layout of rooms on a single screen.

The system, which Xerox is demonstrating at this years Which Computer? Show, supports the natural way people work, "rather than forcing them to change what they do to suit the limitations imposed by screen-sizes and windowing systems," says Mr Lindesay.

Michael Wiltshire

■ JAPAN: plans to build on its supremacy in laptop sector

Advancing on many fronts

JAPAN'S computer makers are betting that the next generation of computer users will fall into their laps – literally.

Japanese manufacturers believe their increasing supremacy in the production and sale of laptop computers will lead to a significant expansion of Japan's role in the overall computer market.

Japan's consumer electronics companies control half of the laptop and notebook market, the industry's fastest growing segment. And Japanese dominance of such critical technologies as disk drives and liquid-crystal-displays (LCDs), together with Japanese skill at shrinking components, has led such US stalwarts as IBM and Apple into joint ventures with their Japanese competitors.

While laptops account for 13 per cent and 20 per cent of the European and US PC market respectively, they account for almost half of all PCs sold in Japan. Many analysts believe the European and US figures will double within three years.

Japanese miniaturisation techniques are sure to help them lead the emerging palmtop and tablet markets. Japanese companies are increasingly dominant in disk drives, not only at the low end with hard drives for PCs, but at the high end for mainframes.

The Japanese have worked hard to improve their software and service in Japan, and hope to begin exporting such skills in the near future. Even with their relatively limited presence in the computer-systems and software market, Japanese manufacturers exported over $20bn-worth of computer-related products last year, some 85 per cent of which were in parts and peripherals.

Japanese makers are increasing their control of high density storage systems as companies such as Epson and NEC continue to gain share at the expense of small and medium-size US makers. Japanese companies are certain to widen their dominant lead in display technologies, including those related to high definition television (HDTV).

Sharp, Epson, and NEC have clearly established themselves as the world's leaders in LCD technology. South Korea and Taiwan, their closest competitors, are years behind, while US makers are virtually non-existent. Such technologies are growing in importance as HDTV-related systems are used in a widening variety of applications, including workstations which are still dominated by US companies.

"There's no use in having a Rolls-Royce engine if you have a poor monitor," says Mr Barry Dargan, an analyst at James Capel Pacific in Tokyo.

Japanese producers are forging ahead in other areas, including taking industry leader IBM head-on in mainframes. Japanese producers including NEC, Hitachi, Fujitsu, and Toshiba believe their growing presence in PCs will propel them into complete systems integration, particularly as the mainframe market matures relative to PCs.

NEC boasts the fastest supercomputer in the world, the SX-3. Japanese service networks continue to trail their US competitors, notably IBM. However, Toshiba and NEC continue to improve their growing sales channels in the US, while Fujitsu's purchase of ICL has catapulted Japan's largest mainframe maker into the forefront of European sales and distribution network channels.

Although the Japanese still trail in the development of software for export, Japanese companies have become highly skilled at designing operating software systems for the Japanese market. Hitachi and Fujitsu, in particular, have devoted significant resources to the development of world-class software.

Such investments will pay off in the future, particularly as the world moves in the direction of more open industry standards such as Unix, the operating system developed by A T & T which seems destined to become a world standard for small computers.

In the end, Japanese computer makers greatest strength may be the growing dominance of other Japanese industrial sectors. As Japanese industries such as automobiles, pharmaceuticals, and steel continue to expand and automate, they are sure to bring Japanese computer makers along with them.

"It's much tougher [for Japanese computer makers] to sell to GM than to Toyota or Nissan," says Mr Steven Myers, an analyst at Jardine Fleming in Tokyo. Given that PC use in Japanese offices is one half that of Europe and one quarter that in the US, Japan's internal market is poised for a period of explosive growth.

Japan's estimated Y7,000bn information technology market is the world's second largest, and is expected to more than double by the end of the decade. Most of the increase in sales will fall to Japanese makers. Japanese companies will continue to prefer to grow internally. However, more companies may resort to either taking equity positions or outright acquisitions in fields in which Japanese companies trail, such as processing technologies and software.

"The Japanese have to catch up in some areas and they know it," says Mr Dargan. "If they can't do it themselves, they'll engage in joint ventures or acquisitions." Joint ventures such as NMB-Intel are bound to increase as capital-starved US companies increasingly turn to their deep-pocketed Japanese competitors.

"Small West Coast tech houses are vulnerable to being cherry-picked," says Mr Dargan, pointing to TDK's $200m acquisition of Silicon Systems in 1989.

Still, Japan's dearth of software programmers – estimated at 600,000 – is expected to top 1m by the end of the century. Such a shortfall, argue most analysts, can only partially be made up by subcontracting work to Korea and China and by buying small US producers. But Japanese computer makers remain undaunted. If anything, the only impediments most Japanese companies see in the way of their inevitable advance are political.

Fujitsu, for one, has been extremely wary of a political backlash in Europe following its purchase of ICL and its exclusion from three of the five European research consortia to which ICL belonged. Consequently, Japanese makers will continue the less risky strategy of supplying European makers on an OEM basis.

"Japanese manufacturers realise they just can't take market share through competition alone," says Mr Dargan. Japanese companies are diffusing proprietary technologies in south-east Asia as the Newly Industrialized Economies (NIEs) repeat Japan's previous policy of insisting on technology transfer in return for access to their markets.

US companies, burned by their liberal sharing of technology with Japanese companies in the past, are trying to demand a more equitable sharing of know-how.

Robert Tomkin, Tokyo

Toshiba's T1000SE notebook portable can be battery or mains operated. It weighs 2.7kg and is fractionally larger than A4 size

■ THE JAPANESE IN EUROPE: a preference for joint ventures

Patient expansion continues

WHILE European information technology companies continue to experience difficulties, their Japanese counterparts are patiently expanding their presence on the Continent and in the UK.

Although Fujitsu's acquisition last year of ICL garnered the most headlines, scores of Japanese companies are developing production facilities, creating sales networks and searching for potential joint venture partners in the region.

"We very much respect the marketing and software capabilities of European firms, especially their network architecture," says Mr Hideichi Nose, vice-president for European operations at NEC.

Most observers believe that except for sales channels and some software, most European companies have little to offer their Japanese rivals besides political cover.

"European information technology companies rank very low on the list of who the Japanese fear," says Mr David Benda, an analyst at Barclays de Zoete Wedd (Asia) in Tokyo.

"The Japanese want to have a presence in Europe. But what can they get by acquiring a company? Not much, except for distribution," he adds.

Japanese companies prefer to stay away from high-profile acquisitions, even friendly ones such as ICL. Instead, most are concentrating on establishing their own production and sales networks, preferably in the form of joint ventures.

"We have to be certain that investments in fields like semiconductors are welcome," says Mr Taizo Nishimuro, general manager for overseas operations at Toshiba. "It might be easier to go it 100 per cent alone or to buy out an existing firm, but it doesn't guarantee us that those actions will be welcomed by the community."

Most observers believe Toshiba will not be alone in co-operating with its European competitors. Olivetti may be forced to strengthen ties with various Japanese companies, including Hitachi which provides it with hardware on an OEM basis. Siemens sells Fujitsu mainframes and supercomputers, licenses Drams from Toshiba, and given its distribution and service networks, is a natural match for a Japanese partner.

Meanwhile, Bull's increasing problems may force it to fully embrace NEC, which now provides the French company with mainframes. "Bull has to figure out what it's going to cut, what it's going to keep, and what it's going to source out," says Mr Steve Myers, analyst at Jardine Fleming (Securities) in Tokyo. "It's entirely conceivable, but not certain, that Bull will become dependent on NEC hardware and choose to add value through software," he says.

Such arrangements – Japanese hardware and customised local software – are expected to increase as more production becomes application specific. Fujitsu has formed joint ventures with Quotient of the UK and the British subsidiary of McDonnell Douglas, to develop software for the banking and CAD/CAM industries respectively.

Toshiba is developing CMOS chips with SGS Thomson Microelectronics of Holland, while other Japanese producers are sourcing out much of their local software and design work. Moreover, even with higher capital costs and mounting overcapacity in the memory chip market, Japanese companies have not abandoned direct investment. NEC plans to begin construction of a new computer production facility in Germany and has just completed upgrading its plant in Scotland to produce four megabit Drams.

Fujitsu will soon finish a new production facility in Durham in northern England to produce similar chips.

"Investment has slowed," admits Mr Mike Jeremy, an analyst at Baring Securities (Japan). "But not as much as had been expected."

Many analysts argue that one of the attractions of western Europe is its position as a springboard for eastern European market. Over 60 per cent of Japanese products sold in eastern Europe are shipped from Japanese subsidiaries in the EC.

"Naturally, because of its proximity and its similar culture we do feel entering eastern Europe is easier through the west, especially Germany," says Mr Nishimuro. As personal incomes grow in the former Comecon states, the market will shift from large-scale infrastructure projects (a relative European strength) to consumer-driven purchases sure to favour the Japanese, say most analysts.

Moreover, some Japanese companies are attracted by the East's low wages and relatively well-educated workforce. Such allures may lead many Japanese companies to shift much of their assembly operations to the east, and to concentrate on more value-added production in the West.

"To the extent you put semiconductor production into western Europe, board stuffing can then be done where it's cheapest," says Mr Myers.

Political uncertainties remain the greatest fear among senior executives in Tokyo. Fujitsu, in particular, is wary of projecting a high-profile image. "ICL is a different company," says Mr Yuri Momomoto, of Fujitsu. "They have their own plans which we don't know about." Regardless, except for political sensitivities, and perhaps being privy to the setting of standards, most Japanese companies seem unconcerned with being shut out of European research consortia, largely because Japanese companies have much more to contribute than the Europeans themselves.

"It doesn't make sense to keep out the Japanese," says Mr Jeremy. "The Europeans will lose the opportunity to monitor them. It's a two-way street. It's no more Machiavellian than that."

In addition, many argue that dictates from Brussels may ultimately backfire. A 1990 decision by the European Commission setting minimum prices for Japanese chips allegedly being dumped in Europe may help Japanese producers beset by falling prices in the same way a similar 1985 US decree (now expired) rescued a Japanese chip industry drowning in its own overcapacity.

Moreover, adds Mr Benda, as Europe continues to insist that more products be manufactured locally, more Japanese companies will come, posing a further threat to European companies. Others argue, however, that even if Japanese companies were to show that they are "politically correct" by participating in projects such as the research consortia, it is doubtful that they would be willing to share any of their most advanced technology – something they have never done in the past.

"There must be another mechanism by which the Japanese are forced to share some of their technology," says a Tokyo-based industry observer. "If the Europeans don't band together and try to do something then they may as well throw in the towel."

Robert Tomkin

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SIEMENS NIXDORF

If it's good for our customers, we'll even integrate the competition.

When computer manufacturers talk about system integration, they usually only mean integrating their own systems.

And when customers hear about system integration, they may be fearful of becoming dependent on one supplier.

Siemens Nixdorf is Europe's largest computer company, strong enough to be impartial about system integration. Our hardware ranges from PCs to supercomputers, our software from standard application programs to complete corporate packages. And our experience is the guarantee of objectivity in advising what best suits your needs – even if it means recommending a multi-vendor solution.

While others may go for fast deals, we provide long-term partnership throughout your corporate development. We'll integrate proven products and innovations – host computers, networks, application programs, databases, expert systems, workstations and peripherals.

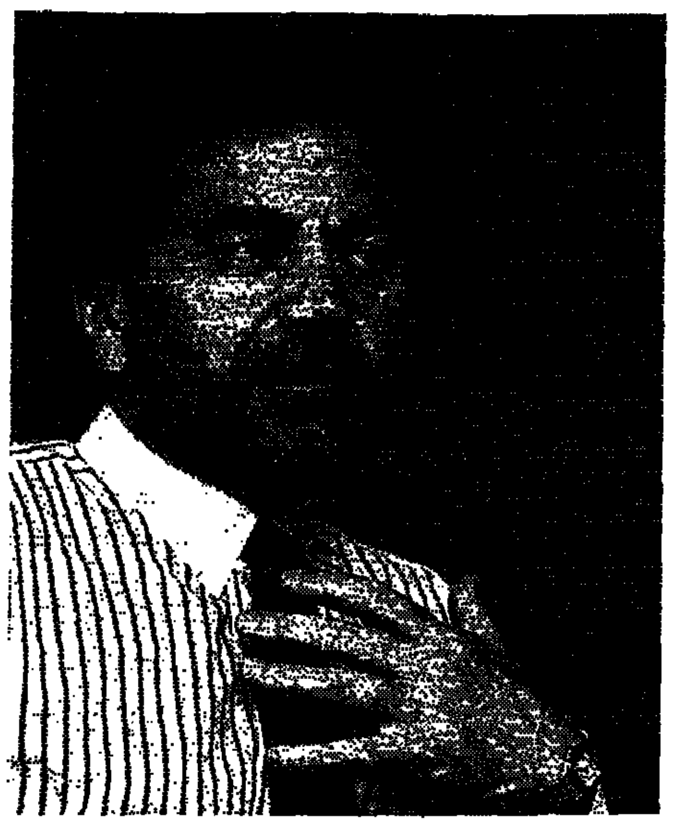
Preferably our own, but if it's in your best interests, even from our competitors.

Siemens Nixdorf Information Systems

Synergy at work

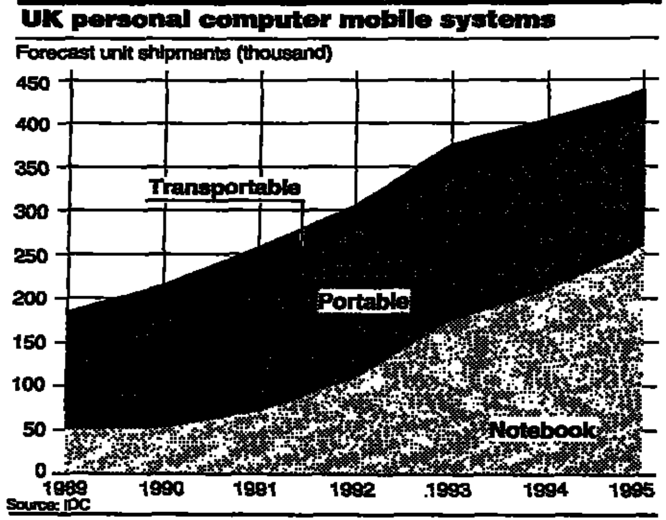
■ UK: an industry still to be reckoned with

Take your partners and consolidate



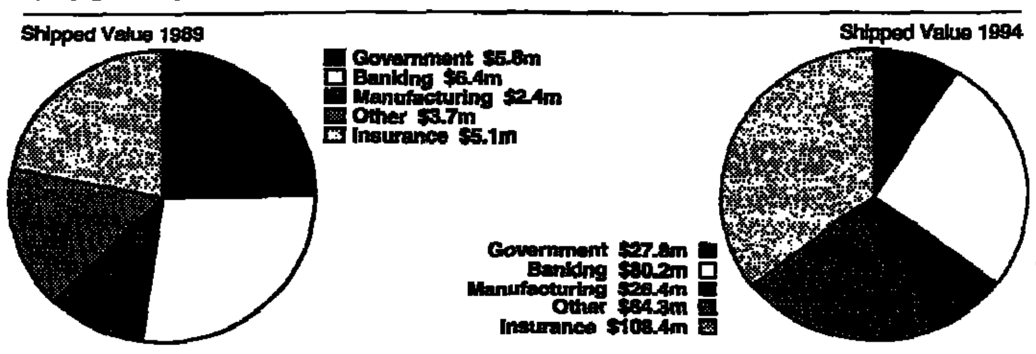
Sugar: every business is suffering

UK personal computer mobile systems



Source: IDC

UK Vertical Markets



Source: BIS Strategic Decisions

McNally: Compaq in the UK is just as much of a British company as ICL was

THE British computer industry is not what it once was.

International Computers Limited (ICL) is owned by Fujitsu, Apricot has sold its computer hardware division to Mitsubishi, Sinclair Research is now part of Mr Alan Sugar's Amstrad computer organisation and Acorn Computers has long been part of the large Olivetti empire.

That does not mean that it is no longer a force to be reckoned with. Not only have some British computer companies, notably Amstrad, survived the market consolidations of the 1980s, but leading international manufacturing facilities have come to the UK.

In addition, smaller, home-grown companies with innovative hardware and software products, such as London-based Psion, have built their own specialist markets.

This has taken place against a background of declining government investment in high technology, the opening up of European markets in preparation for 1992 and the push for development of open computer systems.

ICL, for example, has been behind a push in both the public and private sector over the past few years to encourage the use and evolution of standard, open computer systems in the powerful mid-range and high-end mini and mainframe sectors.

However, it seems that the open systems aren't always good news for UK computer interests. According to Mr Tim Taylor, marketing director of ACT-Logsys, it is open systems which played a large part in inducing Apricot to sell its hardware division to Mitsubishi.

ACT-Logsys, a new company formed from a part of Apricot which was not sold off, specialises in consultancy and support for large public and private sector clients.

"One of the reasons we decided to find a partner for Apricot hardware was that with standardisation and globalisation, it was getting much harder for a UK supplier to survive on a worldwide scale," says Mr Taylor.

That search for a partner eventually led to Mitsubishi buying the company. He adds that the drive for standards has somewhat levelled the technology playing field and is forcing many of the smaller players to move into specialist markets to survive.

Ironically, as computer companies founded by British nationals have either been sold or folded, international companies, such as Compaq Computer and Connor Peripherals have moved in to take their places.

Compaq, in particular, has seen a spectacular rise to success for its UK company – headed by Mr Joe McNally, UK-born managing director. Mr McNally says that, in many ways, Compaq in the UK is just as much of a British company as ICL had been.

Compaq has spent more than $76m on its Scottish manufacturing facility in the past three years. Compaq has built up an annual UK turnover in excess of $1bn thanks largely to a combination of the revenues generated by the factory and the company's sales in the UK.

It was perhaps a sign of the times when Compaq found wholehearted and very senior UK government support for location of the factory in Scotland – although other Compaq European subsidiaries were lobbying heavily to have it elsewhere.

Mr McNally recalls fondly one of the main elements in finally clinching the deal to build in Scotland.

"Former prime minister Mrs Margaret Thatcher personally put pen to paper and wrote to our US chairman Mr Rod Canion," says Mr McNally.

"That played an important role in terms of him deciding to come here – although we did have a lot of support from the government and the Locate in Scotland office," adds Mr McNally.

He suggests that investing as heavily as it has in the UK has produced a lift in sales to public sector bodies, which have in the past largely turned to Apricot for their personal computers.

He says that public sector sales for Compaq in the rest of Europe account for only 8 per cent of its business. In the UK, that figure has recently risen to 18 per cent.

"Clearly the Scottish factory has been an influence," he suggests. But while Compaq is enjoying the benefits of increased public sector and corporate sales, the recession has hit the lower end of the PC industry hard, particularly in the retail sector.

IBM-compatible PCs have become commodity consumer electronics products and suffer the same ups and downs as home fax systems, stereos and satellite television. Amstrad, British electronics company, for example, is feeling the bite of the recession.

"Business is not very good at the moment, but everyone is suffering," admits Mr Alan Sugar, Amstrad founder and chairman. "But that's no consolation. It's been bloody slow and probably will be for the next six or seven months – even if interest rates drop 2 or 3 per cent. It was a bad January and February and the satellite business suffered in February. Things are starting to move again, but not in the volumes we had before Christmas," he says.

Mr Sugar, however, has bounced back many times before and is expected to weather this recession well. At last month's CeBIT exhibition in Germany, he bullishly announced three new products – designed to help lift his share of the portables and small desktop computer markets and to pioneer participation in the colour laptop computing sector.

Geoff Wheelwright

■ THE SCHOOLS: anxiety for the class of '91

Unsatisfactory term, must try harder

THE UK schools' computer business has been going through an unsatisfactory term and there seems little prospect of improvement in the near future.

The two principal manufacturers in the sector, Acorn Computers of Cambridge and Research Machines of Oxford, have been monitoring their sales figures anxiously as the financial year draws to a close and are becoming convinced that economic circumstances and legislative changes are conspiring to force into decline a market which normally expands reliably if unspectacularly.

Mr Michael Fischer, chairman and chief executive of Research Machines, said the sales bonanza which usually characterises the first three months of the year had failed to materialise.

"It is pretty bad news for us," he said, adding that the sales decline was disappointing after the company's record results last year. Its turnover was £63m with pre-tax profits of £3.25m.

Mr Sam Wauchope, managing director of Acorn Computers, said sales had been uneven through the year.

He did not think there would be a first-quarter sales increase and overall he believed total spending in schools would decline.

School computer sales normally surge in the first quarter of the year because, with the end of the financial year in sight, special grants for computer purchase, worth perhaps £1m to £2m, become available on an ad hoc basis from the Department of Education and Science and the Department of Trade and Industry.

The usual sales bonanza of the first three months of the year has not materialised

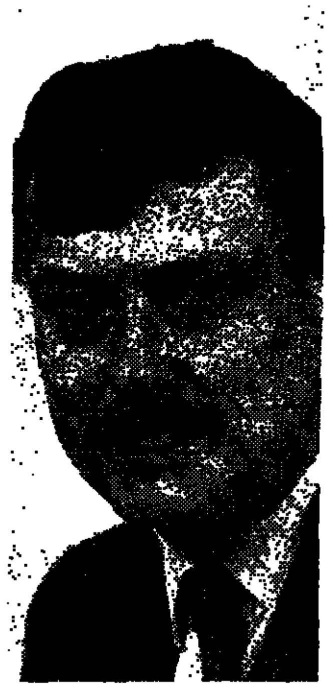
In the current economic climate, however, suppliers are not optimistic that money will be available from these sources this year.

Schools and local education authorities have traditionally raced to spend their financial allocations by the end of the financial year with the result that money from a variety of budgets becomes available for computers.

This year, suppliers believe that schools are storing cash away against a bleak economic outlook. The evidence is that they are deferring decisions to buy more computers.

While exact numbers have yet to be collated following the end of the government's financial year this month, it seems likely that a market that was expected to grow by 10 per cent will contract by the same amount, an overall decline of some 20 per cent.

This bad news comes at the end of 12 months of unsettling volatility in what is normally a predictable market.



Sam Wauchope: Acorn sales have been 'uneven'

The spread of local management of schools (LMS), which by 1993 will ensure that all schools in England and Wales with more than 200 pupils will control their own budgets, has resulted in confusion and uncertainty among those newly responsible for, but unused to, taking decisions about computer hardware and software. In the past, they have relied heavily on advice from local education authority advisers. Some will continue to do so.

Also, difficulties local authorities are experiencing in administering the poll tax has added an element of uncertainty to the value of capitation grants they will make to schools.

School computing is not big business – the whole UK educational computer market including colleges, polytechnics and universities is worth less than £200m.

It is, however, a niche market *par excellence* in the computing business and those companies which have made it their own have enjoyed steady returns in recent years.

The principal players, Acorn and Research Machines, derive their strength from the intimate relationship they have built up with their customers, their understanding of the educational process and their willingness to provide extensive service for modest returns.

Large suppliers like IBM and Apple, while strong in the universities and colleges, have little part in school computing and are unlikely to make inroads.

School computing is two markets in one - the market for educational computing and the market for educational administration. Research Machines and Acorn, with a wealth of ready-written, high quality educational software have cornered the market for educational computing in schools. They are less dominant in educational administration where there is more of a need for conventional computer power.

Acorn, part of the Italian Olivetti group which developed the BBC microcomputer, has dominated the schools market since the early 1980s.

Acorn systems are installed in 85 per cent of schools. It is especially strong in the primary sector where it boasts familiarity and an impressive range of educational software, with more than 1,000 programs listed in the Acorn Education Directory.

Company's latest machines feature a high-performance microprocessor of its own design which has persuaded Apple Computer of the US to establish a joint company with VLSI Technology and Acorn to exploit the technology.

About half Acorn's revenues of about £50m come from sales to schools.

Research Machines of Oxford, privately held, is second overall to Acorn, but holds 44 per cent of the market in secondary schools and 29 per cent in colleges.

About 60 per cent of its sales of £63m are to schools and it has a strong toehold in government computing and computer-aided design.

Research Machines competes in both the computers for education and computers for administration sectors. Recently it won a £4m order to provide every secondary school in Northern Ireland with the hardware and software for LMS.

The suppliers believe that schools are storing cash away against a bleak economic outlook

While the combined effects of LMS, the economy and the poll tax on computer sales are depressing for the companies involved, they also raise questions about the preparedness of schools to teach the national curriculum.

A recent study by the Parliamentary Office of Science and Technology – the independent body that reports to parliament on the scientific and technological implications of big issues such as food irradiation and the greenhouse effect – suggested that schools in England and Wales would need £310m during the next five years to deliver the computer education required by the curriculum.

It is worrying that that sum is unlikely to be made available. It is equally worrying that nobody seems sure of how much money schools will be prepared to spend on computers in the next few years.

Alan Cane

AFTER only 12 years service at the Aldermaston Atomic Weapons Establishment, the world's first modern day supercomputer is already an antique.

The Cray 1A, the pioneering computer designed by Seymour Cray after he founded Cray Research in the mid-1970s, has been consigned to a disused aircraft hangar used by the London Science Museum to store exhibits. Donated to the Museum by the Cray company, it will eventually be displayed as part of the Computing Collection.

Weighing eight tonnes and operating at 160m floating point operations a second (Flops, a measure of supercomputing performance, it cost £8m in 1979. Now it is: "Outdated, large and expensive for what it does by modern standards," according to the Science Museum's Mr Peter Bailey. Today's top of the range Cray, the YMP-8 with eight processors weighs considerably less, operates at a peak of 2.5bn flops and costs about $20m.

The Cray 1A was designed to stand alone; Cray's newest machines are built for what Mr John Rollwagen, the company's chief executive, calls "network supercomputing"; providing number crunching capability as part of a network of smaller computers.

The rapid advances in technology which have so quickly outdated the Cray 1A, have also changed the shape of the supercomputer business.

Rollwagen: Cray's newest machines are built for network supercomputing

■ SUPERCOMPUTERS: a faster rate of change

The high price of top performance

Only a few years ago, there were two dominant manufacturers, Cray and Control Data of the US, supplying a tiny group of customers who both needed the power and could afford the price of the fastest available computing hardware. Today, the same customers – meteorologists, oil exploration organisations, aerospace companies and automobile manufacturers – still need supercomputer performance.

Peugeot SA, for example, an organisation comprising the two French automobile manufacturers Automobiles Peugeot and Automobiles Citroën, has just ordered a Cray YMP2E, a two processor system that nevertheless delivers some 600 mips. It will be used for general automobile research and design including structural analysis, crash simulation, acoustic design and the simulation of car behaviour.

Edinburgh University is advanced in transputer-based supercomputing

The supercomputer landscape has changed irrevocably, however, over the past two years. Control Data, the US supercomputing pioneer has moved out of the area altogether, as commercial difficulties in other parts of its business made the heavy research and development investment necessary to stay at the leading edge too great a burden.

Seymour Cray detached himself from Cray Research to establish a new company devoted to the development of the Cray 3, an innovative machine based on chips fabricated in gallium arsenide, a material which makes possible speeds of about three times the maximum possible from silicon.

The new machine depends on a whole range of new technologies including assembly by robots and is proving a severe challenge even for a man recognised as the world's foremost supercomputer designer.

International Business Machines, which for many years had tended to ignore supercomputing as a niche market where the return hardly justified the investment, changed its mind and came back to the market with a family of vector processors – conventional high performance mainframes with a bolt-on accessory giving a performance for certain applications close to that of a supercomputer. It also funded research into an advanced supercomputer being developed by Mr Steve Chen, formerly a senior designer with Cray Research.

The three Japanese mainframe manufacturers, Fujitsu, Hitachi and NEC launched supercomputers of impressive performance. While critics argue that their machines are let down by inferior software when compared to the Cray range, there can be little doubt that in hardware terms the Japanese machines are set to challenge the best US designs

The principal change in the market, however, has been wrought by a different kind of advance. The emergence of two new kinds of supercomputer – minisupercomputers and massively parallel machines, which offer much of the performance of a conventional supercomputer at a fraction of the cost – have opened new markets for supercomputing. Supercomputers, in fact, is a name not much to the liking of computer engineers who prefer the expression "scientific computers".

On this basis, a high performance Sun workstation carrying out scientific and engineering calculations is in the foothills of supercomputer performance. Speed is the important factor especially where, for example, weather forecasting is involved. As Mr Bryan Little, director of operations for Cray Research in Europe, points out, the calculations involved in weather prediction can be carried out by a small machine – but by the time the answer has been delivered, the storm will have passed.

Minisupercomputers have the capacity to tackle many kinds of calculation and simulation. Some approach the speed of a full scale supercomputer. FPS Computing, for example, which started out building "go-faster" processors has launched a machine which it rates at 2.1bn flops on typical mathematical routines – close to the performance of a $20m Cray for less than $2m.

The kinds of customer who can take advantage of minisupercomputing power include scientists carrying out electromagnetic analysis, structural analysis, signal processing and computational chemistry.

The Cray Y-MP4E supercomputer

Typical of the new superminicomputer manufacturers is Convex Computer Corporation, another company experimenting with esoteric gallium arsenide technology to give speed at low cost.

Cray, faced with the first threat to its pre-eminence in supercomputing in many years, has been forced to meet the challenge from Convex and other minisupercomputer makers by launching smaller, air-cooled models in its YMP series. It also bought a US-based minisupercomputer maker, Supertek Computers, and now sells its S-1 machine.

Massively parallel machines are constructed by manufacturers such as Thinking Machines of the US. These rely for their power on hundreds or thousands of individual processing chips connected together and co-ordinated by special software.

Where is Europe in all this? Nowhere in conventional supercomputing. It does, however, have the skills to build massively parallel machines, using, for example, the Inmos transputer, a processing chip designed for parallel processing applications.

Edinburgh University, for example, is particularly advanced in transputer-based supercomputing. But it will require funding on a substantial scale for Europe to make much headway against the US and Japan.

In the latest in a long series of warnings that Europe is throwing away the supercomputing future, the Italian physicist Mr Carlo Rubbia and a panel of experts have urged the development of pan-European high speed computer communications network backed by a Community expenditure by 1995 of 1bn Ecus a year.

Alan Cane

■ STANDARDS: users wait in vain for common technologies

Consortia add to confusion

THE COMPUTER industry is driven by fashion, and industry standards is the current craze. At one time, indeed, it seemed as if a genuine enthusiasm for common standards might result in lower costs and greater simplicity of operations for customers, a notion much promoted by the manufacturers themselves.

The belief was that if manufacturers were prepared to agree common technologies for operating computers, connecting them together and running software, users would be saved the cost and complexity of connecting dissimilar hardware. At the same time, software suppliers would be able to write programs capable of being run on any machine, cutting the cost of the multiple versions they have to produce at present.

That, however, has proved a vain hope. For most computer users, the standards issue has become hopelessly confused. The suppliers have done little to help matters, taking part in seemingly endless series of industry consortia to promote one standard or another. There are compelling financial reasons for this apparent waywardness – backing the wrong standards horse can be an expensive mistake. But somewhere along the line, the idea of common standards to which everybody in the industry adheres for the benefit of the customer has been lost.

Common standards are crucial to the idea of open systems, which most observers believe will play an increasingly important part in data processing over the next decade.

What is an open system? According a new handbook*, they are defined as: "those that conform to internationally agreed standards defining computing environments that allow users to develop, run and interconnect applications and the hardware they run on, from whatever source, without significant conversion cost".

The author goes on to point out that the key factors for users are that no single supplier actually "owns" (that is, has control of) the environments involved and that the mixing and matching of applications and hardware can be achieved without significant cost.

The reality is that every supplier of any size is scrabbling to own, or at least share ownership, of any hardware or software element which looks as if it stands a fair chance of becoming a standard. The result has been a series of pitched battles which show no real signs of abating.

Even the oldest standards war, the fight over how best to connect computers together in telecommunications networks, has yet to be resolved after more than 15 years.

On the one hand, standards setting bodies are trying to establish a set of rules called Open Systems Interconnection (OSI) which they have now almost completely defined. On the other hand, International Business Machines (IBM) is insisting that its SNA rules will remain the way for its own machines to be connected together, while many customers are content with rules called TCP/IP devised by the US Defense Department.

Or consider, for example, the latest industry initiative, a consortium of 20 leading suppliers including the US companies Compaq, the leading supplier of high performance personal computers, Control Data, the mainframe supplier and Digital Equipment, the world's principal minicomputer maker. It also includes the Japanese suppliers NEC, Nippon Kokan KK and Sony.

The consortium has established what it calls an Advanced Computing Environment (Ace) whose elements include support for software operating environments from Microsoft (OS/2 version 3.0) and the Santa Cruz Operation (Open Desktop, a version of the Unix operating systems) and microprocessor chips from Intel (80/386, 80/486 and so on) and MIPS Computer Systems' (advanced reduced instruction set computing, or Risc) chips.

The aim of the group is to "unify" the industry by establishing standards combining software and hardware technologies from personal computers, computer workstations and multi-processor computers.

The group does not include, however, IBM, the world's largest computer manufacturer, which frequently seems to behave as if it feels it has an inalienable right to decide which standards the industry will adopt. It is a leading light behind the Open Software Foundation, which has been developing its own Unix-like operating systems, OSF1.

Some observers see the formation of the Ace consortium as a challenge to IBM; others as an attempt to displace Sun Microsystems from its dominant position in the Unix workstation market place.

Sun, an ambitious, fast-growing company, has about two-thirds of the market for Unix workstations based on its proprietary Risc design called "sparc". It has been licensing this design widely in an aggressive attempt to establish it as the industry Risc standard.

One of the first licensees was Solbourne, a workstation manufacturer. Mr Barrie Murray-Upton, its vice-president of European operations, said after the announcement of Ace: "Why would 20 of the world's leading computer manufacturers band together to form a consortium unless they were seriously worried about the continuing success of sparc technology?"

The Ace group's attempt to appear cohesive was not helped, either, by the emergence of a splinter group among the 20 declaring its support for yet another version of Unix. The upshot of all this wrangling is that customers' need for genuinely open systems has been hijacked and treated with contempt by rival industry gangs.

Groups of users have attempted to establish their own ginger groups, but with only limited success – General Motors' attempt to set a manufacturing automation protocol (MAP) is one example.

Earlier this year, in initiative sponsored by the user arm of X/Open, one of the earliest standards pressure groups, representing hundreds of users met in Dallas, Texas, to formulate plans to encourage manufacturers to speed up the introduction of open systems. They deliberated and drew up lists of their requirements. The resolutions, however, fell far short of an ultimatum to the manufacturers. Computer users, to some extent, have only themselves to blame for the way manufacturers treat them.

Alan Cane

**Practical Open Systems by Ian Hugo, NCC Blackwell, 108 Cowley Road, Oxford, OX4 1JF. £20.*

■ SEMICONDUCTORS: when is a computer company not a computer company

It all depends on the number of chips

MR Bernard Giroud, vice-president of Intel, takes strong exception to anyone calling his organisation a computer company. By contrast, Mr Tom Beaver, vice-president of Motorola, positively insists on his organisation being called a computer company.

Regardless of how they prefer to be styled, both of these leading US semiconductor manufacturers now make products which used to be made by computer companies. As computer companies concentrate on profitable activities such as software and systems integration, semiconductor companies such as Intel and Motorola are spending more of their time manufacturing computers.

Ten years ago, the computer companies simply provided customers with their computers. Now the task of traditional computer companies has shifted, says Mr Giroud. "The end user is asking for more software, more assistance, more training," he says.

As computer companies have moved away from their older manufacturing role, Intel, the world's leading manufacturer of microprocessors, has moved in. "We are doing what an ICL or a Nixdorf was doing 10 years ago," Mr Giroud says. "We are making the central processing unit that ICL used to make 10 years ago."

The reason he insists on Intel not being called a computer company is that it does not deal directly with the end users of computers. "A computer company is a company that sells solutions to the end user. We supply hardware to the system integrators. They supply the technology to the end user, combined with the software. We are not in competition with Compaq, Hewlett-Packard or IBM."

Motorola, America's biggest semiconductor maker, sees itself as being more directly involved in the computer industry. Mr Beaver says the company regards itself as a manufacturer of standard computers, along with their operating software. The only area in which Motorola is not involved is in the provision of applications software.

Five years ago Motorola established a separate computer division, which Mr Beaver heads. One of the reasons why Motorola wanted to move more decisively into computer manufacture was to help influence the debate over common operating standards.

The computer industry worldwide has seen a move away from computers which are unable to communicate with those provided by other manufacturers. Customers are increasingly insisting on common standards or open systems. They are demanding that different manufacturers provide computers that can talk to one another. Motorola

'A computer company is a company that sells solutions to the end user'

makes computers which use A T & T's Unix operating system.

The move from proprietary to open systems provided Motorola with what it saw as a commercial opportunity.

"We saw a lot of computer companies struggling through the transition from proprietary to open systems. We saw a lot of them deciding to become niche companies, specialising in banking, insurance, what have you. They're letting someone else build the hardware. We saw that as an opportunity because our corporation is good at competing in commodity products. We make computers as a commodity item," says Mr Beaver.

Mr Beaver says he sees the world computer industry today as being divided into three groups. The first consists of companies providing a mixture of computers adhering to both their own and to common operating standards. He says the American companies IBM, DEC, Unisys and Hewlett-Packard belong in this category, along with Siemens of Germany.

The second group consists of companies providing computer systems to clients in particular fields, such as banking or law, and contracting out much of the hardware manufacture. He puts Wang of the US, Olivetti of Italy, Philips of the Netherlands and Nixdorf of Germany (now part of Siemens) in this group.

The third group consists of companies providing products for the open systems market. NCR, Intel, A T & T, Sun Microsystems and Compaq – all of the US – fall into this category, as do most of the Japanese computer companies. So, he says, does Motorola. Participating in a commodity market, he says, these companies have to sell computers on the basis of price and performance.

The move by many computer companies away from manufacturing is not the only reason that some chip companies have become computer manufacturers. Mr Giroud points out that technological developments mean that computers use fewer and fewer chips.

"At the moment, you take two chips from Intel, eight chips from someone else, add the memory, and you have a personal computer. In 1984 or 1985, you needed 1? chips plus the memory to make a computer. In 1993, the 10 chips plus the memory you need today will become one chip plus the memory," Mr Giroud says.

As the number of chips used in computers shrinks, semiconductor makers effectively become computer manufacturers. "What we are doing is we are putting a PC on a chip," Mr Giroud says. "The chips we are designing now have 4m to 5m transistors."

Michael Skapinker

■ DISTRIBUTION CHANNELS: a year of change

Three-tier structure crumbles

THE past year has seen big changes in the ownership of the companies which distribute computer equipment in the UK. In general, control of the leading companies has moved outside of this country.

In the past 12 months Frontline, one of the most successful of UK computer distributors, has been taken over by German distributor Computer 2000, while network specialist QDL has fallen to Micro Macro, a Netherlands combine, and in the past few weeks Software Limited has been taken over by Ingram Micro of the US.

These changes of ownership are arguably less important than the changes in the structures of computer distribution channels that have been taking place.

A few years ago computer distribution channels in the UK could be defined quite easily. The manufacturer at the top would sell equipment to distributors, who in their turn would sell it on to computer dealers. But more recently this three-tier structure has begun to erode.

Pressure on profit margins has encouraged manufacturers to remove the centre distributor tier, and to deal direct with computer dealers, and even with customers. At the same time, we have seen the growth of the super dealer, operations such as Computacenter and Technology which are large enough to deal directly with suppliers, and dealer/distributors.

The two types of operation meet in the middle, with dealer-led companies such as Computacenter and Technology becoming, to all intents and purposes, distributors, and with distribution operations such as Rossendale, adding computer dealer operations to broaden their base. Pressure on margins is such that it is difficult to see, in the minds of many analysts, how an operation that deals solely as an intermediary, taking equipment from a manufacturer and passing it on to a computer dealer without gaining any extra profit margin from selling direct to users, can survive.

One danger for the trade-only distributor is that the market will split, leaving such companies handling mainly the more esoteric product ranges and lower volume shipments to smaller dealers.

As the bigger dealerships are beginning to show, and as smaller distributors which move back into direct sales confirms, large amounts of money can be made through a combination of relatively limited product ranges shipped at high volumes.

Mr Derek Lewis, head of Technology, argues that large corporate dealerships such as his own company should concentrate on on two, maybe three ranges of computer hardware. Mr Lewis's company is a member of Comec, one of two big European dealer associations, and the implications of this are clear – if the dealers throughout Europe who are members of Comec decide on

Pinchbeck (left): makers will be like supermarket suppliers. Sculley: working on price puzzles

an official range of computers, they can drive a very hard bargain, forcing the margins of manufacturers down.

This worries Mr Don Pinchbeck, managing director at Epson UK. He feels that "the reseller who is pan-European can seize power from manufacturers". Comec and the International Computer Group (ICG), which is the rival association of which Computacenter is a member, can through the combined buying power of their membership overturn the food chain, controlling the manufacturers rather than being controlled. If this happens, Mr Pinchbeck sees computer manufacturers becoming very much like the suppliers of UK supermarkets, having prices, terms and conditions dictated to them by a few all-powerful chains. A possible escape-route, he feels, involves manufacturers learning from the motor industry and moving machines tailored to individual specification straight off the production line. The manufacturer, in effect, would become a systems integrator.

Other manufacturers are however exploring different routes to survival. One of the basic planks on which Compaq was founded was its determination not to sell direct, but in recent years, as the power of its equipment has increased, the company has found itself evolving what is in effect a direct sales force that does not sell direct.

With the exception of the large chains, a company's individual dealers do not have the resources to sell adequately into what is, in effect, the minicomputer market. If a company will not set up the kind of direct sales force traditionally used to sell minis, it finds itself forced to do an increasing amount of hand holding for the dealers who are making the sales. Compaq UK has in the past few years hired a number of staff from mini manufacturers, and Mr Gian Carlo Bisone, head of European marketing, is no stranger to these techniques.

The nature of the market accentuates these problems. Mr Bisone describes the primary characteristic of the dealer channel as being that it has no money, and Compaq pursues intricate schemes in order to inject money into it without the extra cash disappearing in the shape of increased discounts to customers.

Training and joint marketing programmes are examples of how this can be done. Other manufacturers are engaged in heavy support programmes for their dealer base, and one possible consequence of such approaches is that dealers – particularly those who are not part of large associations – will become more closely bound to single manufacturers. These manufacturers may, albeit accidentally, convert their dealer base into what is effectively a direct sales force.

In the UK, Apple has traditionally taken a similar approach to Compaq, attempting to keep prices and the level of its dealer expertise high, and taking a highly combative line with discount houses. However, it has created a problem for itself, in terms of sales channels, with its new low-cost range of machines. There are rumours that the company will later this year release a range aimed fair and square at the home/games market which indicates that the problem can only get worse.

Selling these without overturning the applecart and forcing down prices on its higher specification machines is a puzzle Apple is still working on. Mr John Sculley, chief executive officer, has made confusing and perhaps ominous references to rapid turnover-style outlets.

There is an alternative that Apple will almost certainly reject. If manufacturers in general find themselves facing lower margins on the machines they sell into distribution channels, is it not logical for them to consider reducing the number of tiers in the channels, or perhaps eliminate them completely by selling direct to users?

Speaking at a conference in Düsseldorf last month, Mr Billy Ho, Mitac associate vice-president told the company's distributors that, at least for machines that are priced at commodity level, the company would have to face up to a reduction in the number of tiers in the channels.

Mitac, a Taiwanese company, is one of the largest computer manufacturers in the world, although its name isn't that well known to users because it has traditionally built for other computer companies. His view was that Mitac distributors worldwide would have to begin to sell direct to users in order to increase sales and maintain profitability, and if as seems likely other manufacturers are thinking along similar lines, the future could hold increased terrors for independent dealers.

John Lettice,
Editor, MicroScope

■ MAINFRAMES: life in the old system yet

Right-size gains credence

THE mainframe computer will it not lie down and die. It continues to demonstrate it has a viable, long-term place in information processing and management, in spite of the inevitable effects of the recession, and the continuing suggestion that it is to be supplanted by a collective of mid-range, workstation and PC systems.

One of the main assumptions in the suggested demise of the mainframe, and one which has had a significant impact of late, is downsizing. This is the concept that, as technology allows the same performance to be packed into an ever-smaller physical size, so the need for the big boxes will diminish to an eventual vanishing point of economic non-viability.

The evidence is now starting to point away from this inevitability. Instead, the term "right-sizing" is starting to gain credence. With that credence comes an appreciation that the mainframe will continue to have an important role. What is more the corollary of downsizing, that the technology will be exploited to add more power and performance to a system of any given physical size and price, will provide continued justification for that role.

Right-sizing takes as its basis the fact that different types of applications in information management require different systems architectures to run them most efficiently. Therefore, while it is far more sensible to run a highly user-interactive mix of spreadsheeting, graphics and text report writing applications together on a PC, the same platform is totally inadequate as the host of a large, on-line transaction processing system.

Here, there is really no alternative to a large mainframe installation and an extensive disk farm of on-line data storage. As such on-line transactions processing (OLTP) systems are the life-blood of most large corporations, such as the financial institutions, there is unlikely to be any significant reduction in either the role of or demand for mainframe systems.

The main differentiator that defines mainframes, minicomputers and workstations/PCs, is the relationship between an application's data and functionality.

Cleaver: recession worries for mainframe business

An application that is data-rich but functionally poor, such as OLTP or large database management, is ideally suited to a mainframe solution. Applications with the inverse ratio suit the workstation/PC, while the minicomputer matches applications which require a reasonable mix of these two elements.

The fact that there is still very much a role for mainframes has not meant a healthy flow of business for the manufacturers. Industry-leader IBM indicated that the slump in its business, thought to have been stemmed following a good fourth quarter last year, looks set to continue for at least the first half of this year.

The company has laid the blame on the spreading recession throughout Europe and Japan, though US analysts, such as Mr Ulric Weil of Weil Associates, have suggested that downsizing aspirations by customers is also having a considerable impact on the company's mainframe sales.

There is a negative impact felt from the problems in computer leasing business, which has been a significant sales route through which IBM has reached its customer base.

The recession is, a big worry for IBM's mainframe business, for it has followed smartly on its introduction of a complete new range of systems, the System/390 range, described by Mr Tony Cleaver, IBM chairman and chief executive, as the biggest and most important announcement for a quarter of century.

Amdahl is still the only mainframe supplier to offer an implementation of Unix as a native operating system on its machines

In spite of that significance, sales of systems in the range have been slow, except for a small increase which occurred during the fourth quarter last year. Then, sales of the most powerful, six processor systems, the ES/9000 Model 900, and the top of the entry-level machines, Models 330 and 340, rose sharply.

This looks as though it has been a temporary excursion, and that sales will continue slowly. As well as the problems of recession, the machines mark a fairly radical step function both in performance and compatibility with the the existing IBM mainframe product family, the 370 Series.

There are only a limited number of bridges between the two families, and users of 370 series machines may first have to upgrade their existing systems to one of the configurations at which a transition to the equivalent ES/9000 can be made. There have also been some missed compatibility opportunities in fairly obvious, even rather silly areas.

For example, the upper range of the ES/9000 series is water-cooled, as are the 370 series machines, yet they use different diameter piping to supply the coolant.

In spite of the continued reliance on proprietary architectures and operating systems from the mainframe suppliers, there are signs that open systems concepts are now penetrating deeply.

Amdahl, for example, is still the only mainframe supplier to offer an implementation of Unix as a native operating system on its machines. Others, including IBM, only offer it as a guest running under the proprietary operating system.

Unix on the mainframe has been a slow starter, but some users see it as a way out of being locked in to not only proprietary systems, but the pricing that can go with them. It offers opportunities in providing more coherent communications between different hardware platforms, a fundamental element of open systems, if they are all running broadly the same operating system.

If Unix does become more prominent on mainframe systems, it offers the chance of greater freedom for the IBM plug compatible systems manufacturers, which include the likes of Amdahl and Fujitsu.

These have built their businesses on making hardware that runs IBM software but is cheaper and/or more readily available than IBM kit. Any significant switch to Unix in the market could allow both them and the users a wider, more competitive choice of sources for applications software. It could reverse the current situation and allow a native Unix to act as host to a manufacturer's existing proprietary operating system. This would provide current users of proprietary systems with continuity as well as broadening the choice of upgrade path.

Martin Banks

■ PRINTERS: concerned about scale

Smaller but more powerful

THE trend to downsizing where applications previously carried out on a mainframe can now often be done on a mini; and the power that one expected from a mini now being available in today's top of the range PCs is having a profound effect on the market for printers.

On the one hand, advanced features and performance is required and yet, at the same time, the market will not bear prices which appear to be out of all relationship with the falling prices of the PCs to which the devices will be connected.

Some users want colour, others need improved quality such as higher resolution (in dots per inch) while many departments need to handle multi-part forms. Furthermore, a growing proportion of users need a graphics capability to handle a variety of text fonts and sizes as well as charts and more complex images. This is a facility which is widely available, especially in the non-impact page printers.

One long-felt business need is colour to enable, for example, profits/losses to be more readily seen in a spreadsheet. The simplest way of achieving this is to use a printer with a two-colour ribbon as was used in a manual typewriter. Where this would be too slow, colour ink jet and thermal transfer printers come into their own.

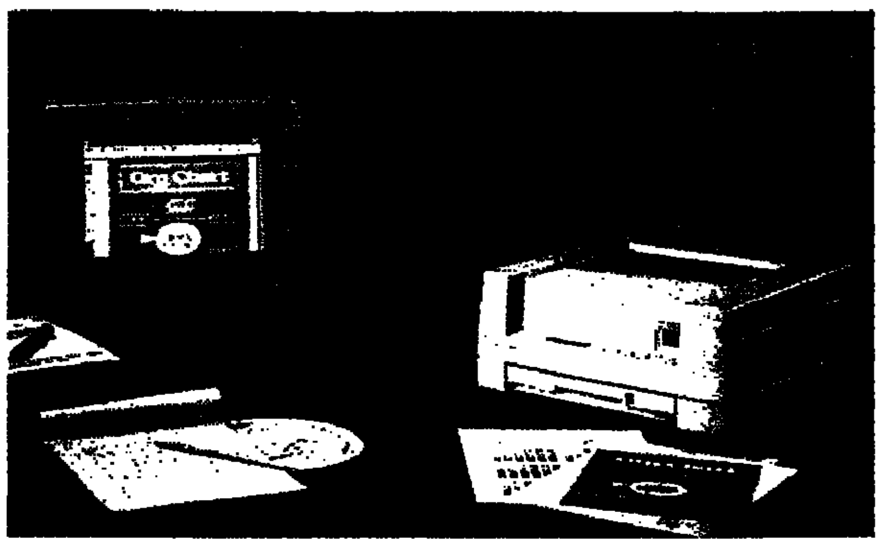
"The market for high quality colour printers is one which, until now, has been supplied with high priced machines," says Mr Richard Bright of Mannesmann Tally, printer manufacturer. "By introducing a sub-£2,000 thermal transfer page printer we have significantly reduced the cost of colour page printing, without sacrificing print quality. What was a specialist piece of equipment is now available to general business users."

According to BIS CAP International the European colour printer market is set to expand from 170,000 units in 1990 to 500,000 in 1994 and will be worth about $1.3bn by 1994. The UK printer market is likely to grow from 45,000 units in 1990 to 180,000 in 1994. It will be worth $400m by 1994.

While, no doubt, some of this growth will come from normal business users, a growing proportion will be in computer-aided design (CAD) and desktop publishing where users will be able to get a colour representation of their documents before going out to print in high volume.

The widely-used laser printer with its 300 x 300 dots per inch (DPI) resolution is frequently not considered adequate for DTP. Hence, once the work has been completed on the Macintosh (or PC), the actual camera-ready artwork is prepared on a higher resolution printer often of more than 1,000 DPI.

Bridging the two markets is the Qume CrystalPrint Express. Not only does this 12 page per minute (appreciably faster than the average laser printer) provide 600 x 300 resolution which is adequate for many applications it incorporates a number of interfaces (including AppleTalk) and emulations which together offer the compatibility required when the printer is a "shared resource" on a local area network (LAN).



The Mannesman Tally MT7400C low cost colour page printer

Also vying for this market are other versatile printers such as the Kodak Ektaplus 7016 and the HP Laserjet III Si from Hewlett-Packard, the market leader in the non-impact market. While both of these are 16 pages per minute (PPM) the former incorporates a 6 PPM photocopier "designed for those simple one or two copies tasks common in the busy office environment thus increasing productivity by reducing waiting time at the photocopier".

The latter, using HP's resolution enhancement technology together with microfine toner, is claimed to give resolution akin to that of a 600 DPI printer. One of its options is that it can have a direct high-speed connection to a LAN, such as Novell, so obviating the need for a separate PC as a printer-server. This is far more cost-effective than with many networked printers.

Laser and ink jet printers are "non-impact" unlike dot-matrix machines which tend to have a low-tech image and are often derided for their lower quality and high noise level. In spite of this they are the workhorses of industry and commerce and are able to handle multi-part forms which the other technologies cannot handle. According to Romtec, the market analyst, for those reasons plus cost they still account for 57 per cent of the UK market with laser and inkjet holding for 27 and 11.7 per cent respectively.

For example, Epson which tends to be identified as the world's predominant supplier of dot matrix printers (in spite of claiming to take a growing share of the non-impact market) produces both general purpose and specialised products. A good example of the latter is its DFX-1000. This is a heavy duty system printer which will handle high-speed printing of multi-part forms at up to 300 lines per minute making it, they believe, the fastest serial impact printer in the world.

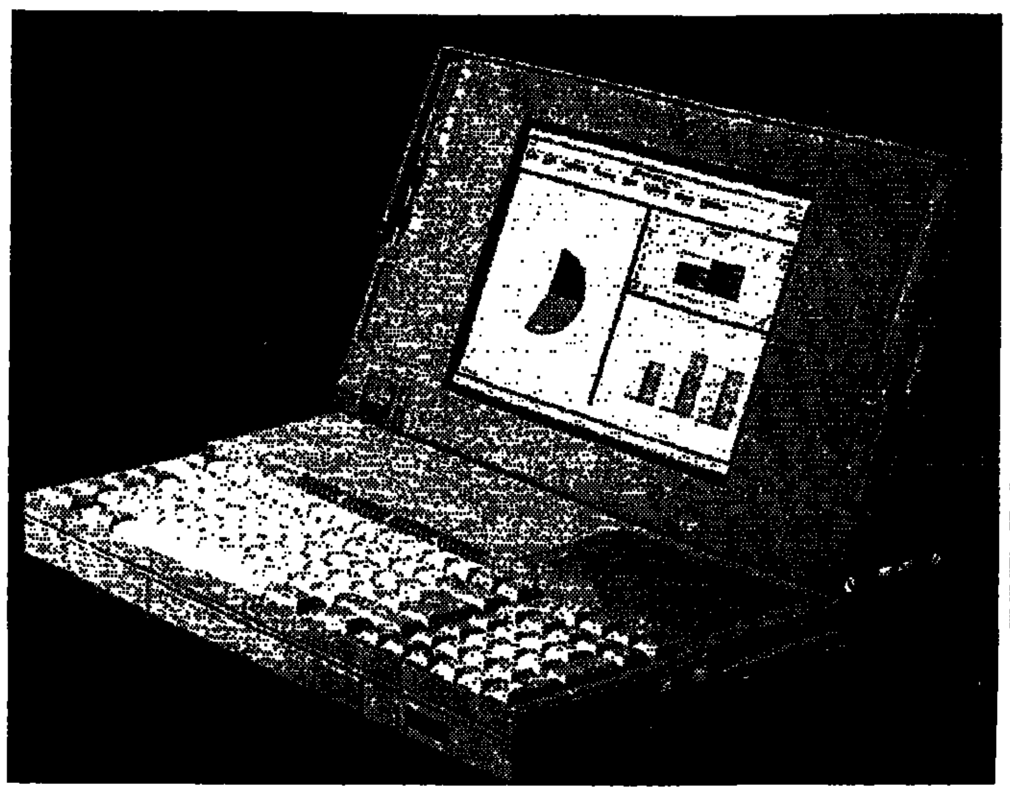
However, Romtec also reports that, during the fourth quarter of 1990, Epson and Hewlett-Packard had 29.2 and 23.6 per cent respectively of the printer sales (in units) to business end users via dealers, distributors. Retailers direct sales by the manufacturers only accounted for a very small proportion. But, as the Epson business is largely in the lower-cost dot matrix market, the value of HP's sales is higher.

The dot matrix market is facing tough competition – especially from inkjet printers – as users become more conscience of the image that their own printed output creates.

Ms Nicky Ayre, product manager at HP says the Deskjet HP DJ500 is "the better alternative to the dot matrix and that there is no longer a price-penalty to pay for higher quality". She says HP is focusing on the higher quality that is being expected by the discerning users. The HP DJ500 is ideal as a personal printer where the requirement is for about 50 pages per day and is increasingly being installed in people's homes.

It can be seen that there is no universal requirement. As a result, the variety of printers continues to grow. Unfortunately, it is not easy to find the collection of features that are needed at an affordable price.

Adrian Morant



Olivetti Laptop S20/D33

■ WORKSTATIONS: market continues to grow

Makers plan more powerful machines

COMPUTER workstations are "not just for 'techies' anymore", Sun Microsystems, market leader, has declared.

These high performance desktop computers have until recently been aimed primarily at engineering and scientific applications. Sun and others see a new market opportunity for workstations as high-powered business computers.

"The mass penetration of workstations into markets dominated by personal computers, minicomputers and mainframes isn't a future event – it has already happened," Sun claims.

The marriage of computer workstation performance with the vast software base of the PC is luring dozens of computer makers and software developers into this emerging market. PC companies such as Compaq Computer and Apple Computer are planning to build more powerful desktop machines based upon Reduced Instruction Set Computing (RISC) microprocessors borrowed from the engineering workstation world.

Workstation manufacturers such as Sun, Digital Equipment and Hewlett-Packard are targeting business users as well as their traditional engineering and scientific markets. The technical features and market characteristics that divide the PC and workstation markets are fast disappearing.

Business applications are increasingly being ported to varieties of the Unix operating system which is widely used on engineering workstations. The raw data processing power of the PC vies with that of low end workstations. Distribution patterns are also overlapping.

Traditionally, workstations have been sold primarily by direct sales forces or through value-added resellers who add specialised software. Increasingly, however, workstations are being offered by the computer dealers and retail outlets that dominate the PC market. However, as workstations enter the business market a conflict between PC and workstation software standards has arisen.

While Microsoft's DOS operating system dominates the PC world, Unix – in various forms – is the operating system of choice for workstations. Backers of the Advanced Computing Environment initiative, an industry consortium of 21 companies, have declared their support for both a future unified version of Unix and a future version of Microsoft's OS/2 operating system.

Market share of workstation shipments worldwide

	%
Sun Microsystems	32.4
Hewlett-Packard	21.2
Digital Equipment	16.2
Intergraph	7.0
IBM	6.7
Silicon Graphics	5.9
Sony	2.8
Next	1.0
Others	7.2

Source: International Data

Members of the group acknowledge that they are hedging their bets, until it becomes clearer which way the business workstation market will move. The emergence of workstations as business computers has added to the fierce competition in all sectors of the $7.5bn workstation market.

Sales of workstations are expected to total $9.2bn this year and reach over $12bn in 1992, according to Dataquest, the market research company. Sun Microsystems is the clear winner in workstations, with a dominant 32 per cent market share.

'Marketing prowess and execution will ultimately determine the winners in the workstation market'

Sun's combination of the Sparc Reduced Instruction Set Computing (RISC) microprocessor and SunOS version of Unix has attracted several licensed cloners who offer Sun-compatible computers.

Sun's strategy has been to establish Sparc as an industry standard and mostly through the success of its own products it is succeeding. Industry analysts predict that Sun will continue to lead the workstation market throughout the early 1990s although International Business Machines may aggressively challenge Sun.

"By 1992-93 Sun and IBM may tie for first place among workstation vendors," predicts Ms Vicki Brown of International Data.

IBM has made a remarkable resurgence in the workstation market since its introduction, a year ago, of a range of products based upon its own RISC design.

The company sold $1bn-worth of its RS/6000 workstations in 1990 and gained a 6.6 per cent share in the market. Sales are expected to rise to $1.7bn-$2bn this year.

Hewlett-Packard, the number two workstation vendor, lost market share in 1990 but is expected to make a strong recovery this year with the recent introduction of a new product range.

Using an enhanced version of the Reduced Instruction Set Computing (RISC) architecture upon which its minicomputers are based, HP has taken a technological leapfrog to produce machines that greatly outperform comparably priced workstations from its main competitors.

HP's new top of the range Series 700 Model 730 workstation is twice as fast as IBM's fastest workstation, and 3.5 times the performance of Sun Microsystems Sparcstation 3, HP claims.

Digital Equipment saw its share of the workstation market reduced in 1990 to 17 per cent from 23 per cent in the previous year, according to IDC.

Digital is aggressively supporting Ace, the Advanced Computing Environment initiative, and plans to upgrade its DEC station product line with new workstations based upon the powerful R4000 Mips computer RISC chip, when that device becomes available.

"Marketing prowess and execution – not pure technology – will ultimately determine the winners in the workstation market," predicts Ms Brown of IDC.

A challenge for all workstation participants will be to maintain profit margins as average workstation prices fall and to adjust to new distribution channels as the market for workstations expands.

Louis Kehoe, San Francisco

■ REVERSE ENGINEERING: conflict and compromise

'Let the industry do what it does best'

REVERSE engineering, the practice of unravelling a competitor's product to learn how it works in order either to emulate it or to attach proprietary equipment, achieved unlikely political notoriety last year after a European Commission draft directive designed to protect software makers unleashed one of the fiercest bouts of lobbying ever witnessed in Brussels or Strasbourg.

The purpose of the draft directive was both simple and honourable; to protect the creators and suppliers of personal computer software who are being cheated annually of about £3bn in Europe through unauthorised copying of their products.

The idea was to eliminate existing disparities between the copyright protection systems for software in the member states as part of the Commission's general plans for the harmonisation of EC law for 1992.

As such, it was supported to the hilt by organisations such as the Business Software Alliance, the Software Publishers Association, and the Federation Against Software Theft.

The Business Software Alliance, established by six of the world's leading PC software suppliers – Aldus (desk top publishing) Ashton Tate (database) Autodesk (computer aided draughting) Lotus (spreadsheets) Microsoft (operating systems) and Wordperfect (word processing), has taken a leading role in initiating legal proceedings against companies it believes guilty of software theft.

However, what turned a commonsense measure designed to protect software companies in a uniform manner across Europe into a political hot potato was the fine detail in the draft. Computer manufacturers realised quickly that the provisions of the directive would specifically forbid unauthorised reverse engineering and in doing so, hamper their efforts to compete with the leaders of the industry such as International Business Machines (IBM) and Digital Equipment Corporation (DEC).

A campaign led by the hastily formed European Committee for Interoperable Systems (ECIS), to persuade members of the European parliament and the Commission to modify the directive was immediately initiated.

The software suppliers, together with IBM and DEC who saw the opportunity legally to forbid Japanese manufacturers access to their technology, took the opposite line and for some months the two lobbies fought a fierce war of words.

It was not surprising that the Commission's draftsmen failed to anticipate the scale of the row they were to precipitate. Reverse engineering, while simple in concept is complex in detail and the extent to which it is used is essential. Furthermore, its use in the computer industry is rarely appreciated by outsiders.

The compromise proved broadly satisfactory to the hardware manufacturers and to the software suppliers. However, the issue has continued to spark controversy

It is an easy concept to understand in conventional engineering. Automobile manufacturers routinely take their competitor's vehicles apart to see what makes them tick. So what is reverse engineering in computer software?

It is software archaeology, according to Mr Gilles Lafue, a software specialist with Andersen Consulting. "It consists of extracting the software's functionality (what the software does) and the design (how it does it) by analysing the software's implementation – that is, programming code, data structures, files and databases."

It is necessary because of the dominant position of a small number of manufacturers who are able to set *de facto* standards for data processing systems. That means essentially IBM and DEC. Other manufacturers must so design their equipment that it can be connected to IBM's or DEC's if they are to have a share of the data processing cake. To do so, they have to understand the design of the connection, or interface, in great detail.

That knowledge can be acquired either directly from IBM or DEC – leaving the competitor at the mercy of the industry leaders – or it can obtained by reverse engineering with or without their permission.

Of course, reverse engineering can be used to create a competitive product through copying or improving on the original which is why software makers are keen to have it banned. Many of the best software innovations are not patented but simply hidden away in thousands of lines of computer code to prevent copying; legal reverse engineering, the software specialists complain, would be tantamount to a plagiarist's charter.

It was not simply hardware manufacturers and software houses who were upset. Europe's computer users realised their ability to carry out essential maintenance on their software would be hindered by the directive. (Maintenance, in the software business, means modifying and extending existing programs rather than repair.)

A compromise position was reached in December last year when a version of the directive was agreed in Brussels which provided for:

- Classification of software as literary works
- A definition of originality
- A common term of protection in accordance with the Berne Convention
- Legal reverse engineering in limited circumstances.

These circumstances are when the retrieval of information is confined to the parts of the original program necessary for inter-operability, when the information retrieved is not communicated to third parties except to the extent necessary for the operation of the new program and the information retrieved is not used to create or market a program that infringes a copyright in the original program.

The compromise proved broadly satisfactory to the hardware manufacturers and to the software suppliers. However, the issue has continued to spark controversy.

Earlier this month, the European parliament's committee on Legal Affairs and Citizen's Rights proposed 11 amendments to the draft directive which clarify the scope of the directive for research and analysis and the status of interfaces between hardware and software under copyright law.

It has resulted in a new round of lobbying with ECIS in the forefront of a campaign to persuade MEPs to vote in favour of most of the amendments.

Meanwhile, the Business Software Alliance which represents over 800 publishers of PC software, has decided it is time to call a halt.

In an open letter to the legal affair committee earlier in the year it said: "After over a year of extended lobbying, it was finally possible last December to reach a compromise that virtually the whole computer industry could accept. We believe that it is now time to include all of the lobbying and political debate and let the industry get back to what it does best – producing hardware and software – under the terms of this compromise".

Alan Cane

■ MID-RANGE SYSTEMS: hardware architectures under review

Software takes the driving seat

THE undeniable driving force in much of the mid-range systems market is systems software, and in particular Unix and the broader issues of open systems. These, in turn, are changing some of the rules that govern mid-range hardware architectures.

Unix is insinuating its way into a position of dominance in the mid-range market, and the leading manufacturers are all reacting to it. Some, such as Digital Equipment (DEC), have arguably come to it somewhat later than others, while IBM is at last showing some signs that is taking the subject seriously.

The operating system is starting to have an impact on the way mid-range systems are designed and built. Reduced Instruction Set Computer (RISC) chip sets are increasingly the order of the day, for example, and those systems manufacturers that do not have their own designs are signing supply and technology licensing agreements with those that do.

DEC is committed to the RISC chips produced by MIPS Computer, so much so that it holds a minority stake in the company. The MIPS-based DEC Station systems are still largely at the low-end of the company's product range, but MIPS has a new, more powerful 64-bit processor on the drawing board, which is likely to form the basis of any successor to DEC's successful VAX minicomputer architecture.

These chips lie at the heart of the new consortium of leading hardware and software companies, known both as the "Gibraltar Group" and the Advanced Computing Environment (ACE) group, which is aiming to build a new industry standard for both the lower reaches of mid-range systems and workstations. Most estimates suggest that the first new machines built to this standard will not appear for three years.

Evidence to bear this out comes indirectly from DEC, which is pressurising its existing VAX users into updating their applications code to take advantage of future RISC systems within three years, otherwise they will be effectively locked out of future open systems developments. The company plans to shift to RISC-based systems and away from the VAX architecture in the long term.

Unix is insinuating its way into a position of dominance

Prime targets for the ACE group are Sun Microsystems, which claims to own about 60 per cent of the workstation and low-end mid-range market place, and a newly reinvigorated IBM, which has scored some significant recent successes with its own RISC-based machines, the RS/6000 range.

Sun Microsystems is fast becoming an important player in the mid-range market, not only for its own systems but also for its SPARC RISC-chip set, which is being aggressively marketed to other systems vendors. Several names in the mid-range market, with UK's ICL leading the way, have signed up to use the SPARC chip set and have established their own systems in the market place. The chip set offers systems builders a scalable platform, allowing them to develop machines that range from 12 mips (million instructions per second) workstations to 100 mips superminicomputers, all running the same operating system and applications software.

Stretching from the desktop workstation through to large corporate server systems, the IBM RS/6000 has ruffled some feathers among established Unix mid-range suppliers by winning an order for 2,500 systems from Barclays Bank. This cuts across the standard industry perception that IBM only pays lip-service to Unix, and even then takes an alternative stance by having its own version of the system, a extensively re-engineered superset of the Unix standard called AIX.

From the company's early efforts in the RISC-based workstation and mid-range markets with the 6150, which were generally considered to be down on performance and up on price in comparison with the competition, the completely re-worked RS/6000 series looks like making a success of itself. This, in turn, may prompt IBM to take an even more positive stance about it, rather than always managing to give the impression that it is something of an afterthought to other, more strategic product families.

In this context, the company's main mid-range offering is the AS/400 family. Though by most other manufacturer's standards it would be considered a large success, sales of these machines have generally been considered as somewhat disappointing. It has largely been seen as the replacement for the company's old System 3/X line of minicomputers which have a good, if stolid reputation in the traditional small and medium-sized business market.

System 3X replacement sales have been good for the AS/400, but its penetration into new markets, especially those dominated by DEC with its VAX systems, has not been excessive.

The machine has been plagued recently with technical problems, particularly in the area of disk storage. It has been found that disk drives for the machine are suffering from excessive vibration which causes disk crashes and consequent failure of the system. What has made this worse is the fact that the system software is spread across all drives used on an AS/400, which means they all must work for the system to work.

AS/400 users are subject to the changing pricing policies that can come with such proprietary systems. Recent changes in IBM's software pricing for this machine have left users that upgrade their existing systems facing a 50 per cent jump in software costs for enhanced code that had previously been free.

One growing trend in the mid-range market is towards multiprocessor systems built around common devices such as the Intel i486 processor. One of the leading contenders, Sequent, has systems available using as many as 18 of these devices, offering a capability of servicing up to 500 users.

NCR has recently announced systems using a similar architecture which, like the Sequent system, runs Unix. Once again, the basis of the trend is towards scale in both the hardware architecture and the applications software to give mid-range users maximum flexibility.

Such systems go some way towards meeting the growing need for fault tolerance by the simple expedient of using a lot of processors. This is only a partial solution, however, and rarely satisfies those users with business-critical applications that demand the maximum in reliability.

That market place remains the domain of two main contenders, Stratus Computers and, the market leader, Tandem. The latter's Integrity S2 machines use multiple processors, but instead of tasks being shared out among a number of small units, these use large processors to run the applications together, monitoring each other's output and voting between them to discover and isolate faults.

Martin Banks

Alan Harpe

Andrew Carver (left) European vice-president of Nippon Steel's computer arm with the company's president Takashi Iwamoto. The company has ventured into notebook computers

A businessman in the field is worth two in the office.

ONE DAY a small businessman woke up to find he was no longer a small businessman. His business had grown. He now employed over forty people. They'd moved offices once and were already looking to move again. The small businessman had become a middle-sized businessman. To go with his middle-sized business, he had a middle-sized overdraft, a middle-sized ulcer and more of a middle. He was also more than mildly disillusioned.

"I no longer see anyone anymore. I spend all day in meetings with my managers or all day behind a computer. Where are the clients who helped me build this company? I never see them."

What also troubled him was the thought that if he wasn't seeing his clients, and his managers weren't seeing his clients, who was? Other companies with other offers, he suspected. "Trouble is," he said to himself, rattling home on a late train, "you simply can't be in two places at the same time."

A blast of cold air from the outside world announced the arrival of a fellow-passenger. He sat down opposite the middle-sized businessman, took a file from his briefcase and began to work. What an industrious young fellow, thought the businessman. Home late from work and working all the way. He'll get on. He'll do well.

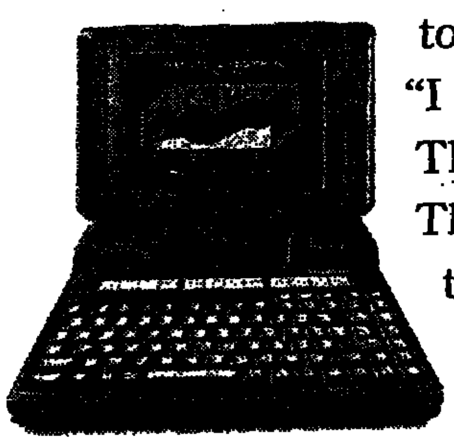
The businessman looked out into the night. Everything was shiny, wet black. Not long to go now he thought. I'll soon be home beside my fire. Only another thirty minutes. Enough time, perhaps for a small whiskey in the dining car. Why not, he thought. Why not indeed.

When the middle-sized businessman returned a little later he noticed the young man was still working. But now he had a computer. A portable computer it seemed. A Toshiba. "Excuse me," said the businessman, "I hope you don't think me rude but I can't help noticing your computer. You see I have a computer too, back at my office. But that's just the problem. My managers and I spend more and more time behind our PCs and less and less time with our clients' MDs."

"Well if you're not spending time with your clients' MDs who is?" said the young man.

"My thoughts exactly," said the businessman. "This very question has been troubling me for some time. Would you mind if I took a closer look at that screen on your computer? It's very clear, isn't it?"

"Yes it's a VGA plasma screen. Something you don't normally get on a battery-powered portable PC. Would you like to see more?"



"I thought you'd never ask," said the businessman.

These days the businessman's business is no longer middle-sized. It has grown considerably bigger. The whole office now uses Toshiba portable PCs. Switching over was a doddle. A Toshiba PC runs all the software the company was using, Microsoft Windows, Lotus 1-2-3 and Microsoft Word. It connects into the office network and can address the company's mainframe. The 386SX technology makes it a faster computer and 80 megabytes is far more storage than they've ever had with desktops.

The big businessman as he now most surely is, got his people out from behind desks and back into clients' offices. With Toshiba PCs they can do business and talk business at the same time, on their computers and with their clients.

He's solved the problem of being in two places at the same time.

To: Toshiba IPS Marketing, PO Box 28, FREEPOST, Pangbourne, Reading RG8 7BR.
Or FREEPHONE 0800 282707. Quoting reference A/K/A/4
Help my people be in two places at once. Please send me details of Toshiba's portable PC range.

NAME (Mr/Mrs/Ms)__________ POSITION__________
COMPANY__________ PHONE__________
ADDRESS__________
__________ POSTCODE__________
PREFERRED DEALER (If any)__________

In Touch with Tomorrow

TOSHIBA

■ IMAGING and SCANNING: an immature technology grows up

Testing the water for entry to mainstream

THE technology for scanning documents is most commonly seen in the ubiquitous fax machine. It is not complex: a scanner detects the presence of shaded dots on the page and then converts this information into an easily manipulated stream of ones and zeros.

In spite of the relative simplicity of the technology, document scanners for reading this information into computers are still rare.

Scanners have, for the most part, been eschewed as an immature technology although the big banks have long used scanners for automatically reading cheques and simple forms, and supermarkets and manufacturers have bar-code readers to identify products.

For at least 10 years, market

So far, almost all the projections have proved to be optimistic, many of them wildly so

forecasters have been predicting an explosive growth in the use of scanning and its related applications, most notably document image processing (DIP).

So far, almost all the projections have proved to be optimistic, many of them wildly so, but there are at last signs that DIP is about to enter the mainstream and that market growth rates are accelerating. As a result, all the big computer and office equipment suppliers are introducing products and investing heavily in research and development.

There are several reasons why image processing has remained a niche activity.

● The specialist equipment can be expensive; in addition to the scanners for reading documents or other items, a user must have software to manage the information, terminals with big clear screens for displaying the images, and powerful computers and high capacity disks for holding large amounts of information.

● Software for converting the scanned image into character-based text (optical character recognition) and for managing the movement of images (usually known as workflow) has only recently reached a point where it is widely available, reliable and cost-effective.

● Most of the products available have not been developed with specific applications in mind. This means that potential users must customise their systems and develop their own application specific software.

Inevitably, this has limited the market.

"The problem is that vendors have been selling the technology as a technology, not as a solution to a business problem," says Mr David Kelly, document management systems marketing manager for computer supplier NCR.

Users often end up developing simple, sometimes ineffective systems: "If you look at the applications, they are not very sophisticated, nor as widespread as the technology will allow," he says.

● Image systems have been developed separately from other business applications. The big banks and insurance companies which have invested in DIP systems have all struggled with the issue of how to integrate their image applications with their traditional business applications.

The technical problems of putting effective image systems together have been compounded by a simple one of scale: a normal A4 page of wordprocessor text takes up about 1 kilobyte of computer memory or disk space, but a scanned A4 page can take up as much as 30K to 80K of memory (depending on complexity).

Such large volumes of information can quickly fill up magnetic disks and clog up communications networks.

Each of these obstacles is now being tackled and to a large extent overcome. The cost of raw computer power has fallen rapidly over 10 years, while optical disk technology has solved the storage problem: each compact disk can store thousands of scanned images.

Compression techniques, high-speed local area networks and high band width communication lines have solved the document distribution problem and now make it feasible for scanned images to be distributed across large companies.

Scanners have improved and fallen in price, with the Japanese taking a growing market share. At the top end, specialist scanners for reading cheques can read up to 400,000 documents a day, some reading both sides. Full colour scanners, although still expensive, are also finding their way into some desk top publishing applications.

The biggest market for document scanners is at the low end, where quality is improving and costs are falling. Kurzweil, a leading supplier, has a system in the £15,000 bracket which can read up to 50 pages a minute at a high-quality 400 dots-per-inch resolution.

Hand-held scanners for attaching to personal computers are available for a few hundred pounds. Last year, an international group called the Scanner Programmers Interface Association announced they were developing international standards to make it far easier to use scanners with simple office software programs.

Until now, fax machines, photocopiers and computer-attached scanners have been separate devices serving separate purposes. But some suppliers believe that eventually the use of "scan servers" will become widespread: documents will be scanned once and automatically indexed, after which any user on an office network can make copies, distribute them electronically, or manipulate them on-screen.

Xerox, developer of the photocopier and the inventor of the windows graphical user interfaces used by Apple and others, is leading the way. It announced in October 1990 that in the US the Xerox Docutech Production Publisher "will ignite a revolution as profound as the introduction of the first plain paper copier in 1959". The system can be used to scan colour images from paper, manipulate them on-screen using "cut and paste" techniques, and print up to 135 high quality copies a minute. But it is not cheap: an initial configuration costs in the region of $220,000.

The most impressive examples of document image processing in use can be seen in the financial sector, where the big paper-bound institutions have developed corporate-sized systems. Norwich Union, for example, recently revealed its

The cost of raw computer power has fallen rapidly over 10 years, while optical disk technology has solved the storage problem: each compact disk can store thousands of scanned images

new mainframe-based insurance claims handling system, based on IBM's Imageplus system. Eventually, it intends to deliver document images to as many 10,000 terminals throughout the organisation.

The benefits of image processing can be seen at Royal Life, part of the Royal Insurance Group. It installed an Olivetti Filenet document image processing system in late 1989 to store copies of its pension plan documents. It has spent a bout £500,000 on the computer hardware and about £300,000 on software.

The Filenet system is being used to hold about 180,000 executive pension plan documents which have been scanned in and are then stored on video disks which can hold up to 40,000 A4 pages. The Filenet scanner is theoretically capable of scanning 40,000 A4 pages a day; Royal Life uses it to process 3,000 a day (it is not an automatic process; each document needs to be scanned, checked and indexed in a process which takes about 20 minutes per page).

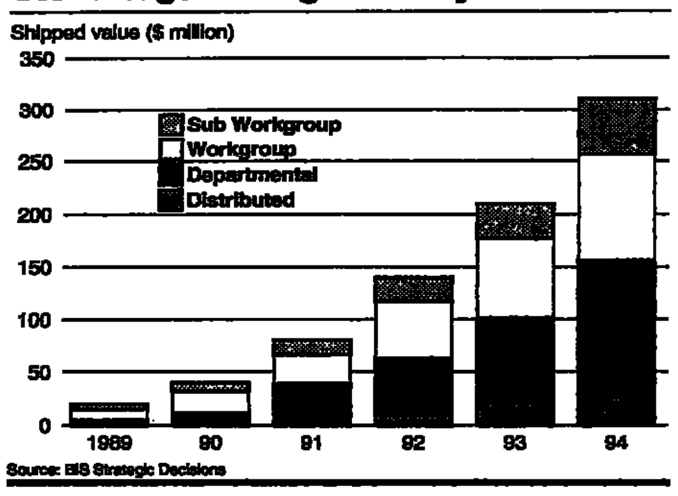
Before the system was installed, the paper files were kept in vast archives. Existing policies took several days to retrieve manually and new policies took between eight and 30 days to process. Financial intermediaries frequently complained about the long delays.

Now, new policies can be processed within 24 hours, while checking on existing policies is immediate. "We can get any A4 page off the system in between two and 17½ seconds," says Mr Alex Littlejohn, Royal Life's customer service manager.

The fastest growth in demand for image processing applications is being seen at companies such as Royal Life, where there is a serious paper storage and management problem which is affecting business efficiency. According to market researchers Ovum, the price of a typical multi-user DIP system will fall from £750,000 to £400,000 over the next four years, attracting thousands of new customers.

Andrew Lawrence

Alex Littlejohn: new Royal Life policies can be processed within 24 hours while checking on existing policies is immediate. Olivetti Filenet image processing system (left): theoretically capable of scanning 40,000 A4 pages a day



Source: BIS Strategic Decisions

■ SECURITY: or confidentiality, integrity and availability

Computer virus is the biggest threat to companies

WHEN computer systems were monolithic machines in air-cooled offices, locked away from most of the employees, the security of the data was relatively easy to guarantee. But the pervasiveness of personal computing and computer networking now means that almost every employee in many large companies has access to the main computer. Ensuring the data is not maliciously altered or misappropriated is therefore increasingly difficult to achieve.

Most organisations are beginning to realise the importance of sound security measures. According to accountants Price Waterhouse, security accounts for 9 per cent of expenditure on new computer systems, up from 5 per cent, five years ago. Today only 5 per cent of companies spend nothing on it compared to 25 per cent in the mid-1980s.

One difficulty for commercial organisations is that there is no single source of risk: instead companies have to secure what is known as the "CIA" of computer data:

● "Confidentiality" – so that only those who are authorised to see or alter the information can do so.

● "Integrity" – to ensure the information is not changed.

● "Availability" – to guarantee the computer is operating correctly when required.

One of the biggest threats to companies is the computer virus, says Mr Peter Jenner, business manager of PA Consulting's security consultancy centre. In the UK, both Rolls-Royce and British Rail, for example, have experienced viruses this year.

Viruses, computer codes which replicate themselves from one computer to another and destroy the integrity of the data, come in a wide variety of forms, many with exotic names. With the "cascade" virus, for example, all the characters fall from the top of the screen into a pile at the bottom. While with the "Italian" virus a ping-pong ball bounces across the computer screen.

Virus checking software is available from companies such as Sophos, of Abingdon, SS International, of Berkhamsted, and International Data Security, of London. It works by checking for the individual pattern that every virus leaves in the program.

However, virus developers see the increasing sophistication of anti-virus software as a challenge to develop ever more complex viruses, says Mr Chris Frost, senior manager in the European data security division of Price Waterhouse, making it increasingly difficult to spot the interloper. The latest stealth viruses change their identification code every time the program is loaded – so the detection system cannot look for a specific string of code.

Other viruses are armoured to prevent detection. When they latch on to a program they encrypt it entirely, making it difficult for the scanning software to detect where the virus code begins and ends. Other viruses have even been developed that remove themselves altogether from the program when the detection software is run.

As often as not, viruses are introduced into a company by an employee bringing in his or her own floppy disk to play computer games at lunchtime. Far more sinister is the hacker who breaks into the computer system by imitating the sign-on procedure of a company employee – by using his or her computer password.

The biggest problem with computer passwords is that employees often do not take them seriously – they are likely to use the name of their

One difficulty for commercial organisations is that there is no single source of risk

spouse, children or pet dog as the password, all of which can be easily guessed by the would-be hacker. Or they use series of easily guessed numbers, or even the word "password" itself.

To overcome this the latest software packages contain lists of unacceptable passwords – up to 20,000 words of them in some cases.

More secure means of preventing unauthorised access to computer systems are on the market or under development. One is biometric devices, such as retina scanners, thumbprint recognition machines and sign-on machines where users have to sign their name.

While somebody can change their password into a computer system easily enough, it is impossible to change a thumb print, or a retina, but this can bring drawbacks. Once a hacker has taken a thumbprint, for example, they can gain access to the computer system repeatedly without anyone noticing.

More complex are combinations of hardware and software. Dynamic password tokens, for example, use devices about the size of a credit card which produce a new numeric password every few seconds. This change is controlled by an algorithm, or mathematical formula, which is synchronised with the mainframe's software. To use the system the user types in a name and password, and then types in the password that is displayed at that moment on the token.

Once a hacker gets into a computer system the results can be horrendous. The widespread use of computer systems in financial applications – payroll, funds transfer or bill payment – has offered organised crime a lucrative opportunity for replacing the security van robbery with split-second electronic fraud.

Most frauds are discovered by regular checks, but expert computer systems are helping to minimise the cost of these. In the case of a bank, for example, the expert system would be programmed to know that a £1,000 transaction at an exclusive clothes shop would probably be genuine, whereas a transaction of the same amount from the local supermarket would not.

There is a growing awareness among computer companies that their operating systems software must be made more difficult to crack. ICL, for example, now offers a high-security version of its VME operating system for commercial use which incorporates mandatory controls: files cannot be moved from one section of the computer to another

The biggest problem with passwords is that employees often do not take them seriously

– from accounts, say, to manufacturing.

Such security measures have also been adopted for the Unix operating system, with the latest version of Posix – which interfaces between Unix and the applications software – having the capability to create these mandatory controls.

Last but not least, computer manufacturers and consultants are selling their wares as disaster recovery companies. Back-up sites and mobile computer units are there to ensure that even if your computer room is flooded or struck by lightning, your business is not destroyed as well.

Della Bradshaw

A showroom in Paris is using NCR interactive self-service terminals to enable customers to see and compare at a glance different options from the Peugeot range. At the same time the terminals also monitor customer usage, supplying valuable information about preferences

■ MEMORY DEVICES: a prime driving force in computer developments

Moore's law passes the test of time

THE prime driving force behind the panoply of developments in computing has been the ever-increasing availability of memory. It is considered quite normal for a portable computer to have more main memory and on-line disk storage than could have been crammed into a mainframe system 15 or 20 years ago.

A significant element in such developments has been the fundamental law of semiconductor manufacturing first postulated by Mr Gordon Moore, chairman of Intel. This states that the number of transistors which can be designed into a given circuit area doubles every 18 months.

This law has held true since Intel developed the first semiconductor memory in the late 1960s. This held just 1,024 binary bits, roughly equivalent to 20 words of text. In the intervening 20 years, the capacity of a conventional Dynamic Random Access Memory (Dram) has risen to 4 Mbits, the equivalent of about 77,000 words of text.

The next big step, to Drams holding 16 Mbits, will take that figure to about 300,000 words per chip.

The availability of this capability to store programs and data has created a large demand for it, which in turn has led to a continual stream of new players entering the market and, in their turn, dominating it.

At the start it was US manufacturers such as Intel, National Semiconductor, Mostek and Motorola. However, in a highly competitive market with high demand, and with other product lines such as microprocessors to service, they were soon overtaken by other companies that specialised in memory production.

These were the Japanese suppliers that still dominate the semiconductor memory business, such as Hitachi, NEC and Fujitsu. It is they that have taken the lead, not only in memory product, but also in research and development in the area. Few US companies now bother making memory chips at all.

Because of the nature of semiconductor manufacture, where the investment required to make devices of this capacity is large whether 1m or 2m are produced, the volume production skills and benevolent investment climate of Japan was always likely to make those companies significant in the market.

Similar circumstances are leading manufacturers in other Asia Pacific countries to target the Japanese suppliers.

Well-known names from Singaporean, Tiawanese and Korean consumer electronics, such as Samsung, Goldstar, Daewoo and Hyundai, are established as suppliers of leading edge devices that rival the dominant Japanese for capacity, quality, quantity and price.

There is a certain irony in this last factor, for they are proving to be highly price competitive at a time when their presence is creating the potential of an over-supply of components.

This same sequence of events brought the Japanese suppliers to prominence in the first place when their aggressive pricing on world markets pushed most US semiconductor manufacturers out of the memory business and prompted the imposition of trade tariffs and sanctions by the US.

The fact that Moore's Law continues to hold true means that it is perfectly possible to predict the future capacity of memory devices, and when they might appear. Not only brute capacity will feature, for by the turn of the century it is confidently predicted that a wide range of special purpose memory devices will have appeared.

For example, the turn of the century should see a technology capable of producing 512 Mbit memory chips but there is, according to companies such as Fujitsu, a more important market in using some of that potential capacity to produce other functionality on the same chip.

It could be possible, for example, to provide logic circuitry on a 256 Mbit chip that will allow the memory to be customised to suit the requirements of a specific application.

Fujitsu suggest it would be possible to include several current state of the art 32-bit processors in just one corner of such a memory chip, with other logic such as analog to digital converters – important for turning real-world measurements into a form which can be handled by a digital computer – also squeezed on to the same device.

Such a memory could have wide-ranging applications in industry, engineering and commerce, simply because it would be re-programmable.

Another area which is expected to see rapid developments is the Flash Eprom, a type of Erasable Programmable Read Only Memory which offers high capacity, non-volatility and a fast re-write capability.

What this means in practice is that companies such as Intel, which is a leader in this particular technology, can produce memory cards the size of a credit-card for portable computers and other space/size critical applications that can be written to with applications and data, stored safely without the need to be electrically refreshed, be read from as often as needed, and be erased and over-written as required.

Gordon Moore, Intel chairman: the number of transistors which can be designed into a given circuit area doubles every 18 months

In all but two important areas, price and capacity, this is an excellent semiconductor analogy of the magnetic hard disk system. Even the most enthusiastic semiconductor suppliers do not see the technology, which boasts 1Mbyte memory cards, taking over from the hard disk in the near or medium-term future as the prime vehicle for on-line data storage.

For shear on-line, available data storage capacity, the magnetic disk is still waiting to be beaten. It is also unbeaten on the classic measure of price per megabyte of storage.

The manufacturers show no signs of giving up such advantages without a fight. Conner Peripherals, the leading US purveyor of small disk systems, has helped to open up the burgeoning notebook PC market by producing systems using disks just 2.5 inches in diameter, yet capable of storing more than 20 Mbytes of data.

At the other extreme, high capacity 5.25 inch disks are being cascaded together in desk-side PC systems from the likes of Dell and Compaq to provide over 1 Gigabyte of capacity – more than many a mainframe system.

The long-standing role of magnetic tape as the medium for storing archive data is under threat. Variations on the CD-ROM, based on established Compact Disk Technology, are providing much higher capacities in a safer and more usable form. In addition, they are starting to prove an excellent delivery vehicle for comprehensive published data, such as directory information.

Most important of all, they open up new markets for companies to publish vital product information such as documentation. Using multi-media systems, such information can be shown in many new forms, including speech, videos and animations, as well as the old standby of text.

Martin Banks

■ R&D: from technology push to market pull

Innovation under scrutiny

AS the shock waves of fiercer competition and accelerating structural change flow through world computer markets, debate is intensifying on both sides of the Atlantic about the policy measures needed to stimulate faster innovation in information technology industries.

The debate is broad because the nature of innovation and the ingredients which contribute to it are hard to pin down precisely. Most studies identify a wide range of contributing factors, including the macroeconomic environment, industry structure, education and training, management culture and capital markets.

Most of these elements, however, respond to policy changes only over the longer term. Hence the search for faster-acting remedies has frequently focused on deepening the technology base by stepping up investment in research and development and encouraging research collaboration between companies and universities.

Since the early 1980s, subsidised joint research programmes such as Esprit have constituted the main thrust of European Community efforts to enhance the competitiveness of its electronics industry. In the US, there has been a growth of industry consortia such as Sematech, the MCC and the SRC.

The trend has been inspired partly by the mounting costs of staying at the forefront of electronic technologies and partly by the widespread belief that government-orchestrated collaboration has played a decisive role in the rise of Japan's electronics industry.

So far, industry performance has not perceptibly improved. Many larger US computer makers, including IBM, are suffering a severe profit squeeze, while in Europe the industry is fighting for survival as heavy losses at companies including Philips, Nixdorf and Bull have prompted drastic retrenchment and restructuring.

Why has the industry failed to respond? One explanation was given in a recent paper by Dr Brian Oakley, former head of the Alvey programme, a five-year electronics industry research project launched by the UK government in the mid-1980s.

He says that though Alvey achieved its technical goals, few of the participating companies turned the resulting research into successful products. That suggests that the weak link in the innovation chain is not a shortage of good technology but companies' failure to exploit it commercially.

A broadly similar conclusion is supported by a number of recent studies of government-sponsored industry collaboration in Japan. These suggest that government schemes played only a minor role, and that the Japanese industry's strength owes much more to the stimulus of fierce competition on its home market and to the structure and organisation of individual companies.

In successful Japanese electronics manufacturers, research and development are much more tightly integrated with production and marketing than in western industry. A team approach ensures the rapid feedback of information between all concerned – including suppliers and subcontractors – at every stage of the process.

In most Japanese electronics companies, R&D are more tightly integrated with production and marketing than in the West

Unlike western companies, which have traditionally viewed innovation as a sequence of separate leaps forward, in Japan it is a continuous process achieved by simultaneous incremental advances across a broad front.

Typically, Japanese manufacturers have many more, smaller development projects under way at once than do their western counterparts.

The benefits of the Japanese system include shorter product development cycles and greater flexibility in responding rapidly to market changes. Furthermore, by spreading their development effort across so many different projects, Japanese companies are less vulnerable to the consequences of individual product failures.

Stung by Japanese competition, many western technology companies are seeking to speed up innovation by attacking barriers between research, product development and manufacturing. IBM, Hewlett-Packard, Philips and Daimler-Benz have all recently taken steps to strip away layers of bureaucracy which slow down their response time.

However, turning technology into manufactured products efficiently is only one aspect of the challenge facing the computer industry. Indeed, as even Japanese suppliers are discovering, it is no more than a necessary condition for staying in the race.

As technology becomes ever more mobile, component prices continue to fall and product lives grow shorter, many types of computer hardware are becoming low-margin commodities. That trend – which is being accelerated by the spread of open systems standards – is compelling manufacturers to seek more of their value-added downstream by competing on functions, services and software.

As this process gathers momentum, the driving force behind the computer industry's development is shifting from technology push to market pull. Increasingly, innovation is stimulated by the way in which computer power is applied, rather than by the specifications of the equipment used to deliver it.

That has placed more influence in the hands of users, particularly larger ones, and is obliging suppliers to tailor information systems ever more closely to the organisation and specific requirements of individual customers.

A number of western manufacturers, such as IBM and ICL, have responded to that trend by directing more of their marketing effort into alliances with partners which possess intimate knowledge of specific industry sectors.

Japanese computer companies are starting to realise that they can no longer rely simply on technical and manufacturing excellence to sustain their growth. Fujitsu's recent acquisition of ICL was heavily influenced by the Japanese company's desire to improve its access to European markets and to benefit from the British company's expertise in systems integration.

Over the longer term, this is likely to mean that computer manufacturers' competitive performance will depend critically on the sophistication and quality of demand in their main markets. Furthermore, as information technology becomes more pervasive and deeply-embedded, the economic benefits it confers will be found increasingly in its application, rather than its production.

However, the heavy preoccupation among western policy makers with technology as the main competitive battlefield suggests that they have still to absorb the full implications of these trends. If their efforts to strengthen the performance of the computer industry are to bear fruit, they will almost certainly need to widen their focus beyond the supply side and place more weight on measures to stimulate vigorous demand.

Guy de Jonquières,
Int'l Business Editor

■ COMPUTER LEASING: collapse sparks an eventful year

Some severe image problems

STATISTICALLY speaking, 1990 was a dull year for the UK computer leasing sector.

Figures released last month by the Equipment Leasing Association (ELA) show a 4 per cent decline to £2.25bn in computer/office equipment leased by its members, who represent more than 80 per cent of the UK leasing industry.

This is the first decline registered for at least eight years, although 1987 produced only minimal growth following exceptionally strong demand from the financial services sector in the preceding year.

According to Mr Brian Hassell, ELA chairman, "the decrease in 1990 reflected the general slowing down in the economy."

In all other respects, the last 12 months have been extraordinarily eventful.

Starting last April with the British & Commonwealth subsidiary Atlantic Computers, a succession of independent equipment leasing companies have collapsed or found themselves in serious difficulties.

With 1,800 employees at the time the administrators were called in, Atlantic was once the world's third-largest computer leasing specialist.

Its customer list in 1983 included the UK Atomic Energy Authority, BAT Industries, Hanson Trust, ICI and Penguin Books. Its 1988 turnover amounted to £756.9m.

The most prominent of the subsequent casualties was Blackspur Leasing, the specialist printing-press leasing company, and ICS, a diversified leasing group whose turnover, at its peak, was approximately £70m.

Leasing is a sales-aid method which assists with marketing makers' new products

In addition, the trading position of Capital Computers – another computer leasing specialist – has deteriorated to such an extent since the end of March 1990, according to the most recent directors' report filed at Companies House, that it has been considering "the sale of all or part of its lease portfolio to third party companies and is also taking steps to review its position in the leasing market place."

While the increasingly recessionary business climate has undoubtedly been partly to blame for the problems that companies have encountered, in certain cases lax management and the questionable structure of the profferred leases also played a role.

Atlantic pioneered an arrangement called the Flexlease which offerred customers the ability to take advantage of advancing technology by upgrading their computers yet which appeared – at least initially – to be extremely attractively priced.

Unfortunately, the Flexlease concept also resulted in the accretion of contingent liabilities due to the leasing company's commitment under certain circumstances to make good its customer's payments over the final year or years of the lease.

Not surprisingly, this year's collapses appear to have been the Flexlease's death-knell.

According to Mr Geoff Sewell, director general of the European Computer Leasing & Trading Association (Eclat), "it is very rare now that anyone tends to look at the Flexlease, although most of the operating leases written give customers the option of going back and renegotiating a new deal."

With the Department of Trade and Industry investigating Atlantic and the fraud squad in at ICS, the collapses have also left the industry with a severe image problem.

This can itself have serious knock-on effects.

One of the factors cited by Capital Computers for the deterioration in its performance was "the lack of confidence in the leasing market . . . following the failure of the number of leasing companies trading in the UK."

Perhaps the chief beneficiaries of the turmoil in the independent leasing sector have been the computer manufacturers themselves, particularly IBM.

Ms Carolyn Jacks, director of Grosvenor Consultancy Services, the leasing consultant, says the situation "provided a marvellous opportunity for the computer manufacturers to market their own lease offering as the safe alternative."

The annual European computer leasing survey commissioned by Solihull-based Eclat underlined "the increasing dominance of IBM's captive financing subsidiaries." More than 70 per cent of the survey's respondents ranked IBM among the top three competitors in the industry, versus 16.2 per cent for Comdisco, its nearest rival.

A year earlier, IBM had polled 54.9 per cent, versus 27.5 per cent for Atlantic in second place.

The survey also claimed to reveal "a rising trend of involvement by IBM" in used equipment and buy-back transactions – a field traditionally dominated by the independent leasing companies with their often painstakingly acquired expertise in the market for second-hand computer equipment.

Though competition remains intense, the pressures being brought to bear on the independents are now prompting expressions of mild concern from some industry observers.

Mr Sewell says: "Few people can specify five years ahead the equipment that will meet their needs.

"The independent sector gives them the option of mixing and matching to meet their technical requirements. Without them we would be back to the original position at the end of the 1970s where the only alternatives available were finance leases."

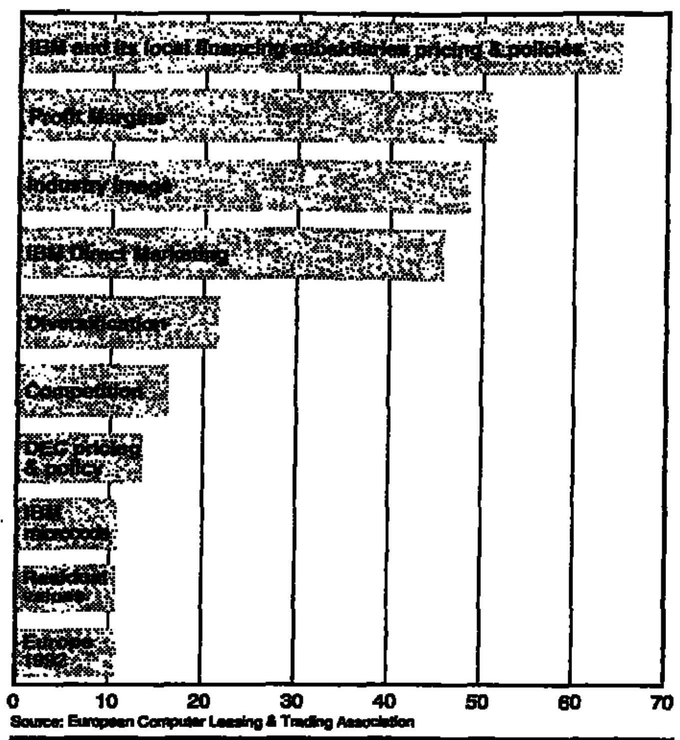
Among the most prominent of the casualties was Blackspur Leasing

Mr Sewell stresses, however, that 50-60 per cent of the installed computer base is still leased through independent leasing companies.

According to Ms Jacks: "For the manufacturers, leasing is a sales-aid method which assists with marketing their new products – they cannot be expected to provide their customers with the ability to change suppliers readily."

David Owen

Key issues for European Lessors / Traders



■ NETWORKING: the art of knowing a Lan from a Wan

Saboteurs are on the loose

MR Gordon Douglas is not a happy man. He manages user relations for the European end of Netware Users International (NUI) the 80,000-strong user group for Novell's Netware, the world's most popular networking software.

Local area networks (Lans) are on the up and up, and Netware is the code that binds them together allowing dozens of people to share files and peripherals such as printers. What concerns Mr Douglas is that software saboteurs are on the loose, networks are their prime target and publishing houses in Germany are printing their methods.

"They publish books that tell you how to plant a virus. You might as well bring out a title on how to make an atom bomb in your living room," says Mr Douglas. His anger at the virus authors becomes understandable as he details the precautions NUI and Novell have been forced to take.

"Virus attack has been the main issue in the last 12 months, and preventing it is very expensive. A lot of leading companies do not allow employees to use diskettes at all, so they can't unwittingly introduce a virus into a network. The problem with networks is that they are meant to be open to many users."

'When does a Lan become a Wan? I don't know'

Mr Douglas talks of protective shells, software that checks a program every time it is entered on to the network to make sure the code has not changed.

NUI has pressured Novell to improve the security features written into Netware. Since Netware is a computer operating system in its own right it is not easy for the virus peddlars to get details of its workings. Documentation is a closely guarded trade secret. But the interface between Netware and the users' floppy disks became a focus for attention.

"Novell has now boosted protection for files entered through Netware. I won't say exactly what they've done, NUI tested the new release by running a virus specifically designed to attack Movell networks," says Mr Douglas. Metware's extra defences repelled the virus.

A successful virus attack can corrupt networked data across a company. "They can act in a nasty way. You find all your storage for the last year has gone. Generally the motivation isn't for gain through blackmail, it's just anarchy," says Mr Douglas. His scorn for the unseen enemy is very real. The other current passion the networking community admits to is economy.

"Security and money are the two big concerns at a typical user group meeting. In the past, networking solutions had to be high-tech and expensive. Now the emphasis is on cutting costs," he adds. Mr Douglas reels off the quick fixes users are resorting to. One site has found it can use power lines as a medium for the local area network (Lan) rather than co-axial cable.

If you don't mind the odd hiccup in non-essential data transmission this makes some sense. "It's daft but cheap!" is the Douglas verdict.

Mr Gary Dyson has been in a good position to observe the rise of the Lan. In 1985 he broke away from IBM with two colleagues and formed Persona Faculty. The dual role company selling products (Persona) and training services (Faculty) was started up to exploit networking.

In 1988, Dyson's £825 a day training courses attracted just 50 end users. In 1990, 1,500 people signed up to get the most out of their networks.

Two factors contributed to this growth says Mr Dyson. The political war over the management of data, with corporate IT departments reluctant to see too much power shipped down to the users, was resolved. The idea of a Lan of PC workstations has been absorbed into the corporate computing model. International standards have moved on, reconciling the IBM sponsored Token-ring with Ethernet, a networking protocol with its roots in the Digital Equipment world.

"The user shouldn't have to worry about choosing between them. They both offer adequate performance, says Mr Dyson." Faculty has ridden out the collapse in hardware sales.

"In these times you can't sell hardware because companies have got enough. But networking means they can turn their PC resources into a system. You make the employees more productive. They cope better with fewer people," he says.

If the Lan is now an accepted standard, what are the big corporate buyers doing to squeeze extra value out of it? As is usually the case in the computer industry, any vaguely fresh idea is the cue for a crop of buzzwords.

The Lan world has now spawned groupware. Referred to in the same breath as joint authoring and discussion databases, groupware allows users to pool documents across a network.

The secret of the software is to co-ordinate contributions without the user being aware of this stage management. Although it is portrayed as structured discussion it is probably better compared to the notorious bulletin boards used to disseminate hackers' tips.

Lotus Notes is one of the pioneering groupware products.

The local area networks (Lans) are on the up and up

Price Waterhouse, management consultants, use it to control activity on the international front, when consultants work for a common client across national boundaries.

Ms Susan Challenger, an international marketing manager at Lotus, admits that Notes may have fuelled the buzzword business.

"We're probably to blame,' but groupware is a means to exploit network software rather than just sticking a program on a network and sharing it," she says.

Lotus finds that network versions of popular programs now make up as much as a third of its sales.

Ms Challenger confesses that the distinction between the Lan and its less famous sister the wide area network (Wan) is not something to tax Lotus's network development teams.

"When does a Lan become a Wan? I don't know. I prefer to think of everything in Lan terms," says Ms Challenger.

Perhaps a recent Dataquest survey offers the best explanation for the low profile of Wans. European Lan spending is predicted to grow from \$2.6bn in 1989 to \$5bn by 1993. Over the same period Wan spending will increase by a modest \$100m, from \$400m to \$500m.

Interconnection between Lans is proving an attractive alternative to Wans managed by expensive mainframes. And LANS are big in Japan.

The high cost of office space in Tokyo forces a rigorous assessment of every square foot. Encouraging staff to share peripherals is one way of keeping the rent in check, with a Lan saving precious space.

Michael Dempsey

Challenger: Notes may have fuelled the buzzword business

■ THE USER GROUPS: an idiosyncrasy of the industry

Mix of cussed independence and some mutual self interest

HEWLETT Packard has an invitation to show off its new Series 700 workstation later this month at its user societies' annual general meeting.

However, this arrangement is not quite as cozy as it looks. Mr Steve Chatterton, chairman of ADUS UK (the HP Apollo workstation user group) has asked HP's main rivals IBM, DEC, Silicon Graphics and SUN, to bring their their top workstations, and to compete in a demanding benchmark test devised by ADUS.

HP is confident that it will not be embarrassed in its own backyard – on paper the 700's specification is superior – but there is little doubt that the move has ruffled HP's feathers, and it is taking the challenge seriously – to the extent that its worldwide workstation manager will attend.

This little drama illustrates the curious mix of cussed independence and mutual self interest that characterises relations between user groups and their suppliers.

The fact that user groups exist at all is testament to this ambivalence.

Fiercely protective of their separateness, yet loyal, and often genuinely proud of their particular affiliation, in the same way that some people are bound to their cars, user groups remain one of the idiosyncrasies of the computer business.

At once ginger group, talking shop and social club, historically these associations were the users' response to the technical complexities of computing and the too often dictatorial tendencies of predominantly US-based hardware vendors. They have developed over the last 20 years into sizeable organisation in their own right: the IBM CUA has 1,500 members, and the DEC group, DECUS, turns over £500,000 in the UK annually in spite of administrative costs donated by DEC.

These national groups are invariably affiliated to larger pan-European or international organisations or groups such as the National Computer Users Forum (NCUF) the UK user groups' user group.

Does this complex network have anything other than a self-sustaining role?

In particular, when so many of the old loyalties and dependencies between vendor and customer are threatened by open system environments, is their much point in vendor specific user groups?

The short answer seems to be yes.

First, one of the primary functions of these groups is educational. "They act as a forum for sharing best practice. The IBM CUA serves as a peer-to-peer information exchange both informally and through its extensive seminar programmes. It helps us to avoid re-inventing the wheel," says Mr Michael Moore, CUA chairman.

DECUS's formal mission is similar exchange, both within the group, and between the group and DEC, says Mr Steve Dawes, chairman.

As long as computing remains technically difficult, and in the short term at least it can only get harder in a multi-vendor, open systems world, then the user groups' basic role seems assured.

The same is true of their place as lobbyists.

This function is increasingly elevated to a formal consultative status. So, for example, DECUS submits annual System Improvement Requests to the DEC main board, a list of technology developments derived from polling individual members worldwide.

At the same time, says Mr Dawes, the UK group is constantly plugging away at local issues – anything from invoicing or licensing practice to an upgrade path for companies using non-standard DEC hardware from the long-defunct Systime.

Nonetheless the prospect of open environments is making its mark.

The fundamental challenge of open systems has prompted a basic restructuring of the ICL CUA, says Mr David Stewart, its chairman.

The 35 erstwhile individual special interest groups under the CUA umbrella, have set up a policy and review forum to consider, for the first time, their common problems, and in particular to clarify a single voice in dealings with ICL over open system and UNIX issues.

Mr Stewart argues that the users' voice generally has not been articulate enough to influence open systems standards, and so far suppliers have dominated the debate. He thinks that ICL will be delighted by the CUA's initiative to define its own coherent set of priorities.

Similarly, Mr Moore and Mr Dawes report that open systems issues are beginning to preoccupy their respective groups. Yet, paradoxically, they also comment that IBM and DEC have never been more attentive in their dealings with their users.

"IBM is relying more and more on user organisations," says Mr Moore. Witness the 50 senior IBM technical staff who attended the CUA's Common Europe Conference in Brighton this month, just to listen to users, he comments.

So what is going on?

Could it be, the argument goes, that far from undermining these user groups, open system, multi-vendor environments, could actually stimulate them?

User groups are persuaded that, as customers become more transient, then suppliers will appreciate just how critical they are in marshalling customer opinion, and ultimately, in keeping their loyalty.

Does this work out?

In part, perhaps. Certainly the days of user coercion are long gone. Mr Richard Owen, HP's workstation marketing manager, who will have to face the ADUS challenge, remarks that HP has long been a customer-led company. "ADUS is one place we can listen to them," he says.

However, the rub, Mr Owen argues, is that whilst user groups are peopled by technologists – MIS managers and systems administrators – then they will not drive IT strategy, and in the long term, it is that, rather than the practical consequences of open computing, that will marginalise them.

Dave Madden

■ GEOGRAPHIC INFORMATION: 'the biggest step forward since the map'

Systems that shed fresh light on information

COMPUTER-based geographic information systems seem set to take their place among those developments which will embody the information age.

They are described by the government as "the biggest step forward in the handling of geographic information since the invention of the map".

The systems facilitate the display and manipulation of data among such established users as the large utilities and national and local government – organisations that have traditionally made extensive use of paper maps – and are increasingly recognised as an accurate and effective marketing tool by a variety of commercial organisations.

GIS, essentially systems which allow the analysis of stored information on a geographic basis, consist of both graphic and alphanumeric data.

Automated mapping provides pictorial representation of maps and plans using precise numerical information, while text-based data covering any number of factors such as cabling, sewers, parks, schools, types of housing and so forth are combined to facilitate analysis and planning.

The main benefits of their use, according to the Chorley Committee of Enquiry set up by the Department of the Environment in 1987 to investigate the handling of geographic information, include fast and easy access to large volumes of data; the ability to analyse spatial characteristics of data and to search for particular characteristics or features in a given area; to link or merge one data set with another; and to produce flexible forms of output such as maps, graphs and summary statistics tailored to meet particular needs.

Mr Glenn Carver, a GIS consultant with information management company CMG, comments that access to data and its proper management are important elements in the successful use of GIS.

"A well managed GIS in a local authority could, for instance, hold all the data for the various departments, updating and distributing information to each department as changes were made. So, a map referenced by, say, a postcode could be called up on screen, and depending on the information required, be marked differently.

"Thus the housing department could ask for all empty council property to be displayed, highways for all traffic light systems, and social services for all registered childminders," he says.

Such systems, however, require an enormous effort of data input, and Mr Carver notes that from the initial decision to develop a GIS, to final implementation, normally takes between five and eight years.

"It is a massive undertaking, you certainly can't just dip your toe into GIS. But we are talking about the complete integration of information within an organisation. It is vital for users to think and plan strategically, and it is part of our job to help them do so."

The extent of the undertaking may have slowed the progress of GIS and until recently confined its use to governments and utilities, but the technology is being increasingly recognised as a powerful commercial tool, enabling companies more tightly to target groups of people as potential customers for specific projects and services.

The potential of geographic information systems will only be secured by co-ordinating the interests of the widely dispersed community of users

Retailers, such as Gateway Stores have recognised how GIS can help support decisions about store location, while sectors such as the oil industry look to GIS to improve transport, distribution and work scheduling decisions.

A number of systems providers and consultants are active in the market in this country, these include McDonnell Douglas, the leading aerospace company whose information systems division recently announced its Spatial Modelling System, which, according to Mr Barrie Laver, who is director of the company's Applied Graphics Group, puts paid to the long-standing gripe of academics that GIS is merely an adjunct to computer aided design.

"Spatial database systems are distinguished by their ability to link graphics and text, thus creating smart graphics which provide a visual window into the administrative database," he says.

Pinpoint Analysis, another company active in geographic information systems, provides demographic and geographic information which, the company claims, when combined with clients' internal information will ensure more effective targeting and delivery of products and services.

Pinpoint is among the leading suppliers of highly detailed digital address and road data for use in GIS and has built up a wide range of databases including a market-specific classification system geared to the financial services market, and a profiling system which analyses UK neighbourhoods into marketing-oriented categories.

In keeping with the increasingly high profile of personal computers, Pinpoint offers Geopin, a geodemographic information system which runs on a desktop computer and was developed specifically to meet the needs of marketers.

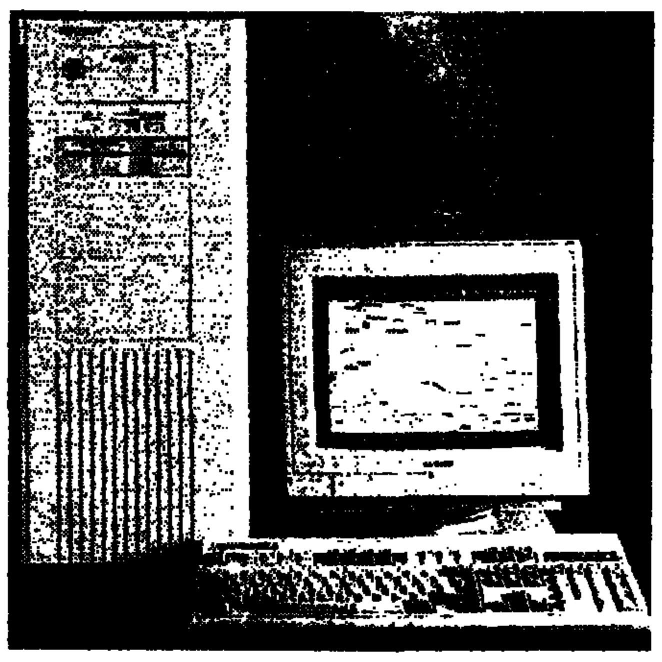
Mr Martin Higgings, a GIS consultant with Pinpoint, explains that the system was designed for users who are not computing experts, but who are increasingly aware of the relevance of geographic information systems to their business and so require the facility to perform complex analyses with the help of simple pull-down menus.

The PC version of Geopin can be extended into a networked system and a compatible mainframe version is also available.

The technology for GIS is well and truly in place, but it is the data needed to make it work which, as well as requiring a considerable time effort, may not always be easily available.

The Chorley report noted, for example, that "information needs to be seen as a corporate resource and be more widely shared between departments and organisations", adding that "the full potential of geographic information systems will only be secured by co-ordinating the interests of the widely dispersed community of users."

Lynd Morley



Tandon's 33Mhz Tower 486

■ CASE: engineering approach fails to match expectations

Consultants come under software attack

THE adoption of traditional engineering principles has helped to improve both the quality of computer software and the process which creates it.

Software developers have turned increasingly to the disciplines of engineering to solve the problems which have plagued computer users since the beginnings of the industry in the 1950s.

The engineering method, first adopted by the military and academic community in the 1970s, is universally acknowledged – if not universally applied – throughout the computer industry.

It has spawned a large and growing market for tools, consultancy and retraining. It has caused businesses to re-evaluate their use of information technology and promised to change the skill needs of the industry. Software engineering makes labour-intensive program coding obsolete and offers greater control over the design and maintenance of software.

In spite of significant backing from industry leaders such as IBM and DEC, the engineering approach has not delivered its expected promise. Its supporters face new challenges. The shift away from proprietary, monolithic systems to multi-vendor, networked systems makes it harder to build information technology systems and has increased the pressure on software engineers.

Mr Richard Barker, head of Oracle Software's software engineering operations, says this is the biggest problem facing the software industry in the 1990s. "The problem of designing one logical program to run across multiple hardware platforms will occupy the next few years," he says.

The engineering approach will play a leading role in solving the problem.

Until quite recently, software production was haphazard and mysterious. Good results were achieved by a mixture of luck and schooled intuition.

However, in the 1980s the engineering analogy grew in credibility and software production was increasingly seen as a craft rather than an art. It was subject to scientific laws and the design and production of a computer program could be defined in the same way that an engineer specifies a bridge or a motor car.

'The current tools were based on the software technology of 1983-84'

This change coincided with increased use of computers as design aids across industry. Computer-Aided Design (CAD) – and the workstation technology it inspired – could be applied equally well to software design and developers quickly discovered how to apply it to their own products.

The results were lumped together under the umbrella name of computer-aided software engineering (Case) and packaged up for a market, eager to find ways to build better software at low cost.

Software pioneers such as Mr James Martin went as far as to say that the application of formal engineering methods to business systems design not only improved the quality of software, they could also give a business edge in the market.

The vision is yet to be fulfilled. For every moderate success, there is equal evidence of failure.

Consultant Butler Cox noted in a report, published at the end of the 1980s, that Case tools only worked successfully, where a formal design method – such as Mr Martin's information engineering – had been introduced. In other words, the principles of systems engineering must precede the use of software engineering tools.

However, there are other reasons for the apparent slow progress.

Mr John Lowrie, who worked with Mr Martin on Information Engineering Facility and now leads Information Architechs, puts some of the blame on consultants: "The consulting world took over the whole concept of Case and it resulted in complete culture shock in user computer departments. Case changes the skill needs – de-skilling the programming back-end job and re-skilling the front end analysis and design.

"It is a fundamental change and means that companies need a lot of change management – an ideal market for consultants," says Mr Lowrie.

He sees this attitude running against real advances in the software technology: "Consultants are not interested in producing the best software technology – they just want to put in armies of consultants."

A more compelling reason for the failures of software engineering is that the technological goalposts have moved.

Early Case tools were conceived at a time when software was built for a single machine and operating environment – usually a large IBM mainframe or a DEC minicomputer.

The information technology systems of the 1990s will be based on networks of PCs, clusters of database "servers" and high-speed transaction processing computers.

"The current tools were based on the software technology of 1983-84. We are now moving into second-generation products based on late-1980s technology," says Mr Lowrie.

He is cautious about raising expectations too soon. "I don't think anyone really knows the answer yet – it is very early days. Our view is that we can evolve into other environments because in Case you are maintaining designs not machine code. But it is few years off."

For every moderate success, there is equal evidence of failure

Information Architechs, launched in autumn 1990 as a spin-off from British Gas, says its future developments in Case are aimed at multiple-platform applications.

"We are attracted to the idea that future systems will be based on client/server databases and local-area networks of personal computers," says Mr Lowrie.

Mr John Lewis, vice-chairman of IPSYS, UK software engineering company, is cautious and points to IBM's problems with its Systems Application Architecture (SAA) as an example of the difficulties.

"IBM announced SAA four years ago to provide a model for bringing its three main hardware architectures together. But its hasn't brought out much of it yet. At the same time it has its AIX/Unix developments, which lie outside SAA," says Mr Lewis.

He sees Unix playing an increased role in software engineering, as a development environment and as a platform for applications. IPSYS is working on Case tools to support Unix alongside proprietary environments.

"It is a question of economics. If you set up IBM's AD/Cycle you need an expensive dedicated mainframe and PS/2 for every programmer. The cost is between £3m and £4m. With Unix workstations you can set up an equivalent system for about £1.5m and get far more power for your money," he says.

Oracle says it has plans to extend its Case products so they can produce applications for multi-vendor networks. At the end of this month, Oracle will announce a new generation of Case products which will allow designers to specify the characteristics of the target environment and customise the system.

This Oracle says, has implications for users. The company intends to include more features which let the user extend the system and define new objects. The company anticipates that within the next five years the distinction between the development of a system and its live running will disappear.

This is a little optimistic. But there is no doubt that this is where software engineering is heading.

Phil Manchester

■ MULTI-MEDIA: tools to create more informative systems

The potential of pictures

A group of 12 computer hardware and software manufacturers has put its name to a trademark.

This is not in itself so remarkable. The establishment of a trademark does not require any great degree of commitment. However, the object of this collection of companies is to establish a way forward for the personal computer industry – and that future will encompass television pictures and sound as well as the more conventional aspects of data processing. The name for this is multimedia, and the trademark is MPC – Multimedia Personal Computing.

Most computer systems are constrained to store and display information in ways more acceptable to machinery than human beings. Text or numbers are the norm, and, where pictorial information is kept, it is most often in a form more akin to a cartoon or drawing than to a photograph. The storage of sound for computerised manipulation is not any more advanced.

There are exceptions to this – a good example being the Domesday Project machines, which use a BBC micro to access all sorts of geographical and demographic data from a video disk, for display on a television screen.

However, in the mainstream of computing such applications are rare. One of the leading suppliers is VideoLogic, a British company. It provides a board which can go into an IBM-compatible PC or Macintosh. It can capture television pictures and sound for editing and inclusion in a presentation alongside other computer data.

Spreadsheets were intended to provide a way of merely doing cash flows

Integration of video, audio and conventional data within a data processing system is known as multi-media. A multi-media system should enable the user to manipulate and view all such data. He could, for example, press a help button, and not only view a manual but bring up an interactive tutorial, where a film can be seen and heard of a teacher explaining a topic of interest.

Such manipulation should be an integral part of the system's capabilities. In a windowed environment, this would mean that the user would see the film in a window alongside other data, and be able to drag it around the screen or desktop or re-size it.

If such machines were readily available, it is easy to see what their potential would be. Wherever pictorial information was needed it could be invoked as easily as more normal text. For example, a travel agent could store the whole of his catalogue of holidays, and then show a customer film of a chosen spot, with appropriate sound track, as well as the normal textual descriptions.

Sceptics might argue that all this is more appropriate to killing martians on a screen and certainly the games or leisure market is where much of the development of such systems has taken place. Multi-media enthusiasts, though, such as Mr Bill Gates of Microsoft, believe that, by the end of the 1990s, it will be the norm, and that computer users will expect to be able to deal in all forms of data, and interact with their machines in far more sophisticated ways than they do now.

"Beethoven's Ninth Symphony is most readily enjoyed if it is delivered in audio form," says Mr Gates, in a piece on the subject published in Encyclopaedia Britannica. He has a point.

One wonders in what other form it might be delivered, apart from a printed score. Obviously, whilst the latter might be useful to a musician, it leaves a lot to be desired to the layman. Merely to provide conventionally-displayed computerised information can be just as limiting because it does not provide the user with a form of data readily interpreted by the most appropriate human senses for the information under review.

A multi-media system should enable the user to manipulate and view all such data

Multi-media promises to deliver information in the most appropriate fashion, but with the same degree of control that you experience with any other computerised data. A company might, for example, need a system to enable them to look at geographical data. You could start by displaying a map. From there, the user might select a town and look at a picture of the architecture, or at a list of companies which have offices there, and then at pictures of their products.

Those pictures could be revolved or walked around to enable the viewer to see them from any angle.

They could be accompanied by a spoken sound track describing what is on view. At each stage, the correct medium would be used to communicate the information.

It would be easy to dismiss this as just another piece of enthusiastic marketing, a product looking for a problem. However, that would be to ignore the way other products have blossomed, and, if not changed the world, certainly made an impact.

Spreadsheets, for example, were originally intended merely to provide a way of doing cash flows, to take the pain out of re-calculating when information changed, but that in itself could not account for their phenomenal success. Users have driven that change, and spreadsheets are now embedded within the corporate culture to such an extent that it is hard to imagine how we could have managed without them.

The establishment of a trademark does not require any great degree of commitment

The Multi-media PC will not be an end in itself, rather it will provide the tools necessary to create more colourful and informative systems. Doubtless it will provide the games player with an even more realistic view of his imaginary worlds, but it could also bring the benefits of computing to a wider business audience than hitherto. At least, that is what the gang of 12 are banking on.

Michael Powell

■ DTP: new software products for a maturing market

Advanced technology lifts desktop publishing systems

INNOVATIVE software producers are giving a lift to the maturing market for desktop publishing systems.

Publishers of larger magazines and newspapers may once have only considered buying, say, a dedicated newspaper production system from one of the leading suppliers, such as Atex or Systems Integrators (SII) of the US, or N. D. Comtec, a division of Norsk Data of Norway.

However, publications across Europe and the US are produced on Apple Macintosh's range, for example, using standard or enhanced software packages from Quark (X-Press) or Aldus (PageMaker), which started life as suppliers of desktop publishing software.

These advanced software products operate on the standard DTP "platforms," such as IBM's PC, the Mac or other computers that can be bought "off the shelf" to produce a wide range of magazines and newspapers.

The Spanish newspaper, El Sol, in Madrid is just one example of a large circulation daily paper produced on a Mac system, using software from Quark X-Press.

The big issue is how to achieve colour-tone consistency

"Many of the most innovative of these newspaper and magazine software systems are produced in the UK – they achieve great results on what, initially, were desktop platforms," says Ms Laurel Brunner of Seybold, the independent information resource group for publishing technology.*

Among these new UK software systems which operate on the Mac are those from DPS Typecraft; Talbot of Bournemouth, and QED of Cheltenham.

Meanwhile, across the DTP industry, the $1.83bn European market is the biggest in the world, and set to continue growing as technology has brought 500 years of graphic communications techniques to the computer industry.

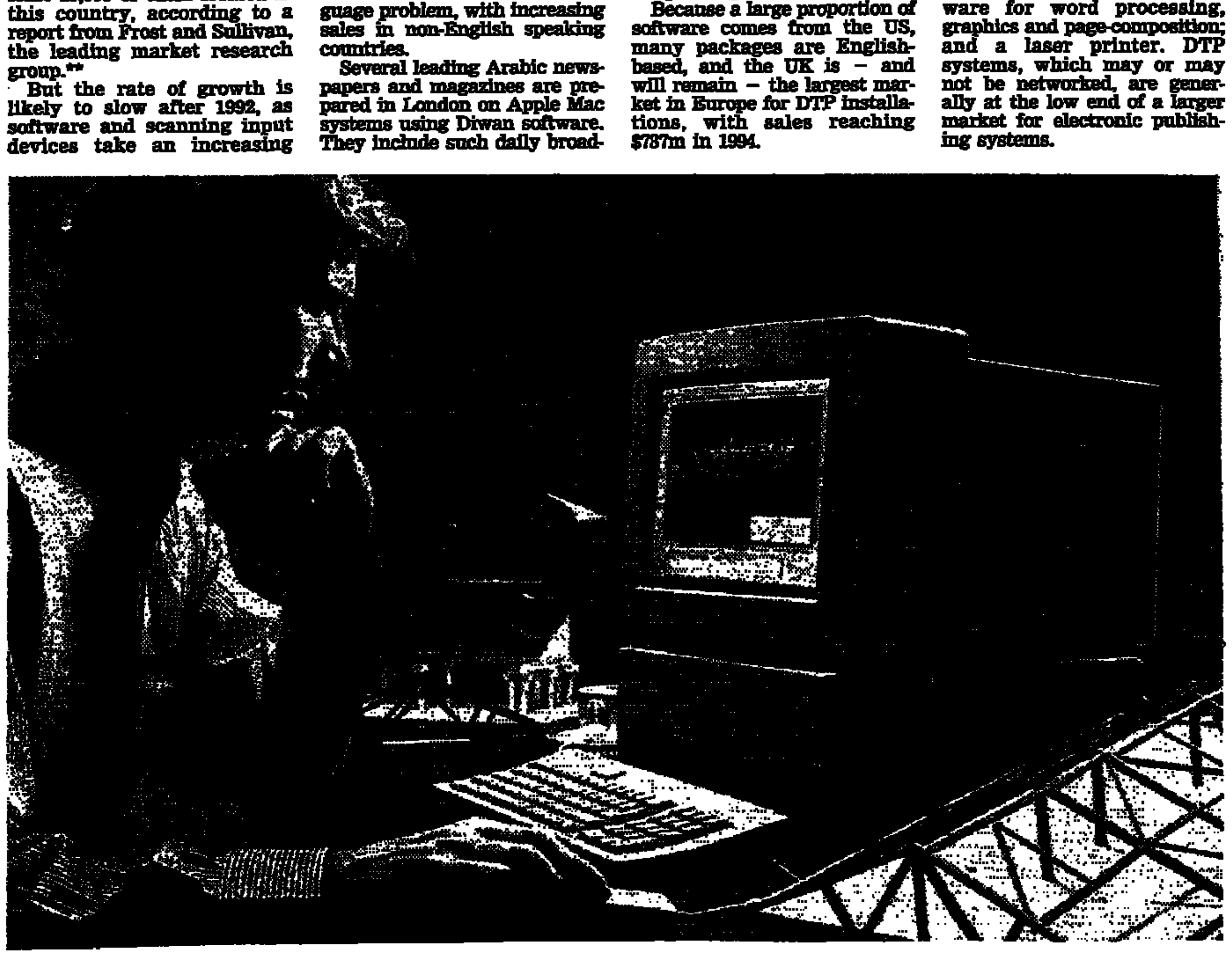
Sales of $3.9bn are forecast by 1994 – by then, there will more than 97,000 new desktop publishing installations up-and-running in Europe, with at least 18,000 of them located in this country, according to a report from Frost and Sullivan, the leading market research group.**

But the rate of growth is likely to slow after 1992, as software and scanning input devices take an increasing share of sales from hardware and new DTP systems. While most DTP software programmes are English-based, companies such as Apple and Adobe have tackled the language problem, with increasing sales in non-English speaking countries.

Several leading Arabic newspapers and magazines are prepared in London on Apple Mac systems using Diwan software. They include such daily broadsheet newspapers as Sharq al-Awsat, Al-Hayat and Sawt al-Kuwait which are produced in London and transmitted electronically to the Middle East for printing.

Because a large proportion of software comes from the US, many packages are English-based, and the UK is – and will remain – the largest market in Europe for DTP installations, with sales reaching $787m in 1994.

A typical DTP system includes a personal computer, a high resolution monitor; a "mouse" or other hand-controlled digitiser for positioning text and graphics; plus software for word processing, graphics and page-composition; and a laser printer. DTP systems, which may or may not be networked, are generally at the low end of a larger market for electronic publishing systems.



Apple Macintosh llci: software programmes in many languages

Colour continues to be a big topic in the DTP world – as systems move on from basic monochrome to colour, the biggest issue is how users can achieve colour-tone consistency across various computer screens, proof printers and presses – a facility which is especially important to advertising agencies, for example.

Innovation abounds in all areas of the market, with higher performance PCs and new software packages. For example, the processing speed of Postscript, the page-description language from Adobe, has been significantly enhanced in the past year as computer speeds have increased.

Vendors of proprietory hardware for professional publishing systems are also "porting" software on to the Macintosh platform.

Apple has announced a new operating system, called System 7, which give a new environment for many applications, particularly publishing.

One of these new enhancements is called "Publish and Subscribe" which allows users on a DTP network to call up "live" material, such as text, artwork or up-to-the-minute price lists.

The $1.83bn European market is the biggest in the world

In the European market for DT systems, analysts expect an upsurge in demand in a number of application areas, particularly the production of magazines, advertising literature and public consumption information. Scanning – and particularly the input of higher definition with greater grey-scale and colour – is expected to push up the cost of scanners and attendant software.

Sales of core hardware, personal computers and printers in Europe could be worth almost $1.3bn by 1994.

**The Seybold Report, Eastbourne, (0323 410561)*

***European Market for Desktop Publishing: Frost and Sullivan, London; $3,800; 071 730 3438.*

Michael Wiltshire

■ EXPERT SYSTEMS: great expectations and disappointments

A story of niche markets

WHEN recruitment expert Mr Nigel Schollick retires in 1995, the knowledge gained in 30 years of interviewing and recruitment will keep working.

His judgments on skills and personality, from "tactless" to "shy on the phone", will be delivered on people he will never meet, through the medium of a software product called STARS II. It is an expert system which performs preliminary interviewing and delivers some guideline judgments to the human interviewer.

This is a typical example of what expert systems are supposed to do – distill the expertise of individuals and deliver them in rule-based systems. Five years ago, there were predictions that expert systems would be a good area for software sales, comparable with spreadsheets in the 1980s. By drawing on the advice of expert systems, not-so-expert people would be enabled to perform skilled tasks with the minimum of training, a process described as de-skilling.

In fact, the expectations have been largely disappointed: some of the most vaunted expert systems pioneers have collapsed in the shake-out of the last couple of years.

From the Japanese, who so publicly waved the banner of Artificial Intelligence (AI) research as a platform for government investment, very little has emerged. Expert systems are nevertheless the most visible of all the AI techniques to have surfaced in commerce.

Expert systems have become the domain of a few small specialised companies, working in niche markets, rather than a recognisable market sector. However, they have penetrated various unrelated niche markets, not by presenting any mystique-laden breakthrough, but by integrating with software that users know and understand.

The story of the STARS product is typical of niche usage, because it uses an expert front-end to accepted psychometric testing techniques. The system is for use by in-house interviewers, and has been designed to help non-experts (rather than personnel specialists) through the first tricky and time-consuming steps of staff interviewing.

Mr Schollick, of European Personnel Counsellors based in Buckinghamshire, has built his interviewing skills into STARS II. His expertise is packaged in the wording of the questions, and in the expert rules which dictate which questions the system asks.

STARS II chooses its own path through the labyrinth of up to 300 questions per interview, selecting the questions in the light of the previous answers. It delivers judgments from a possible 2,000 descriptions – along with carefully-worded suggested questions to probe sensitive areas.

These help the human interviewer prepare for the face-to-face interview that no computer can emulate or replace. STARS supplies a consistency of decision making, and a short cut in assessing applicants.

This is typical of the niche approach. Expert systems seem to be winning acceptance largely as an extension of other applications, and particularly in industries which are comfortable with advanced technology.

The best known examples come from finance and industry. One Australian bank uses an expert system to judge credit card applications. In the UK, ICI uses the technique to assist paint analysis. The Financial Times Business Information report on Successful Expert Systems, published in 1989, cited 20 large UK organisations using expert systems, including a few in mainstream areas.

Mr Tim Johnson, director of London-based research company Ovum, points to the commercial basis which is necessary to win wide acceptance of any AI techniques.

"A lot of systems are for diagnostics – problem tracking of some sort, or providing consultancy, everything in fact from diagnosing medical conditions to finding errors in the production process for gas turbines. Another interesting usage is as a front end to access text databases, to help find the way through the maze of what information is available," says Mr Johnson.

Ovum's report on the European market for expert systems, Knowledge Based Systems: Markets, Suppliers and Products, puts the total for product revenues in expert systems at $70m in 1990 with US revenues of $128m: excluding expenditure on consultancy and customisation.

Mr Johnson notes that the UK, once a hotbed of development, no longer provides Ovum with ready examples of advanced technology. In part, he blames the dissolution of the UK Alvey programme, which funded a number of AI research projects, although there are some signs of life in the AI community, and Ovum is about to publish a new report on Natural Language, the first update since 1985.

"Since Alvey declined, we've had to travel to France or the US to find the latest technology, there seem to be fewer people in the UK to talk to. The US in particular has progressed more rapidly because US companies were quick to adapt when they realised that the early products of research were not quite what people wanted," he explains.

Neuron Data, the US company Ovum cites as having the largest share of the expert systems market in Europe, has just opened a UK direct sales operation in London, a sign of its confidence in the future.

Neuron Data sells Nexpert Object, an expert "shell" which puts the emphasis on integration. This means working with existing databases, on over 30 different platforms, including Macintosh, PCs, workstations, minis, and IBM mainframes, and with different graphical user-interfaces for ease of use.

"Expert systems are just another software technology," says Mr Richard Stow, Neuron Data's UK sales and marketing manager who would like to distance expert systems from the AI tag.

"To customers it's just one technology among many others. The old world of AI – to which Neuron Data never subscribed – was about specialist hardware, very complex software needing esoteric programing skills, systems with guru-level intelligence which learn from experience – no mention of integration or portability. The old world has gone: what predominates is now a view of expert systems from the developer's perspective," says Mr Stow.

He divides Neuron Data users into three categories; the end users, the providers of packaged software, and systems integrators such as Andersen Consulting. Among notable US Nexpert users are Manufacturers Hanover Trust, which has built a system called Inspector, for monitoring fraudulent or high-risk deals, and computer manufacturer Tandem, which uses online expert diagnostics for its Integrity S2 system.

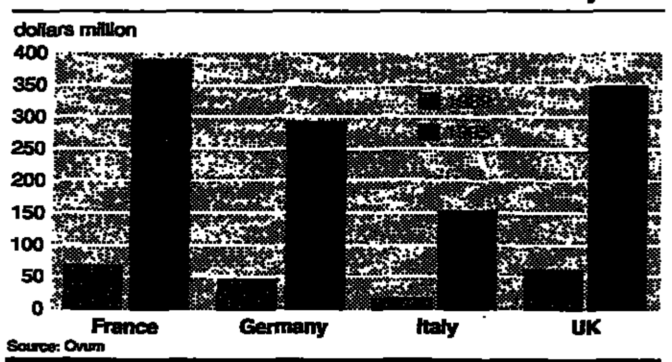
Mr Stow believes the UK market is probably 12-18 months behind the US in terms of take-up of expert system technology, but it will catch up.

Andersen Consulting has about 25 users worldwide, including four UK sites for its Expert Configurator which is built on to the MAC-PAC manufacturing (MRP II) package on IBM AS400s. The expert front end allows the user to match up a specific task needing certain machines with existing tasks and schedules.

"We'd like to think that expert systems are becoming a mainstream technology," concludes Mr Stow. "In the future you might see companies amassing knowledge-bases – with PC networks and shared information, you might even be able to put a value on knowledge as a corporate asset."

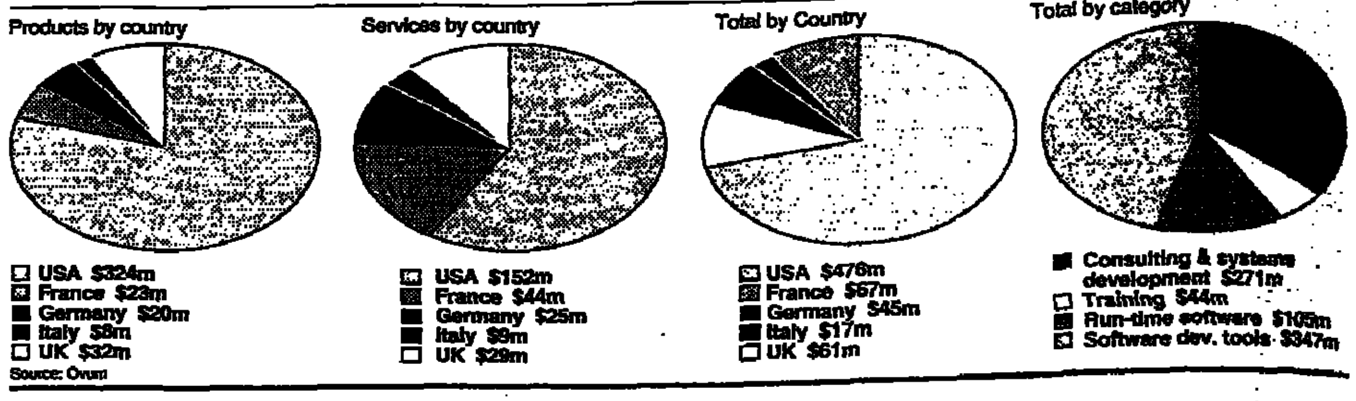
Claire Gooding

Forecasts for KBS markets in Europe



Source: Ovum

Structure of knowledge based systems (KBS)



Source: Ovum

Object Oriented Programming

Reaching a far wider audience

THE computer industry throws up new jargon with monotonous regularity and nowhere is this more true than in the software sector.

Software developers appear to adore arcane language and have produced a succession of intriguing, high-sounding phrases to describe the artefacts they create.

Non-procedural programming languages, life-cycle management, user-friendly systems and relational databases are examples from the last decade.

The start of the 1990s has seen the arrival of another: object-oriented.

Its main virtue for the marketing department is its universality. It can be applied to virtually every facet of software. In the last couple of years databases, languages, design methods and systems architectures have all become object-oriented.

However, behind the awkward American-English (it should, of course, be object-orientated), there is a serious intent.

Object-oriented design suddenly achieved a higher level of legitimacy when, last month, the important US software company Microsoft announced its membership of the Object Management Group (OMG), an industry group founded to promote object-oriented standards. IBM is expected to follow and OMG can now boast all of the prime movers in software technology as its members.

OMG was founded in 1989 by a group of companies who wanted to push the object-oriented approach into the limelight and supervise the creation of common standards. Membership has tripled in the last year and now numbers over 100.

Although OMG is primarily a technical body, it will exert a crucial influence over the design of future computer systems. The concepts of object-oriented design reach into the heart of information technology systems and the OMG and its members will be responsible for laying the foundations of the new order.

That IBM and Microsoft should suddenly make their interest public at this time is no surprise. The commercial exploitation of object-oriented design is just beginning, with bullish predictions for growth for tools which conform to the emerging standards.

In a report sponsored by the OMG, Ovum, the UK researcher, forecasts a European market worth $196m this year, rising to $1.6bn by 1996. The US market is expected to be even larger with total product revenues of more than $2bn by 1996.

Ovum's analysis is based on growth in three areas: languages and tools, developers' tools, databases and CASE tools. "Object technology has emerged from the early days of religious fervour and is experiencing rapid acceptance," says Ovum.

Although it is a new way of looking at computer systems, object-oriented design has its roots in the past. The approach views computer systems as a set of objects, which can be directly related to objects in the real world. An invoice is an object; a manufactured product is an object and they are both represented as such within an object-oriented computer system.

Object-oriented design evolved out of the same research at Xerox Palo Alto Research Centre (PARC) which produced the windows-icon-mouse-pointer interface popularised on the Apple Macintosh.

Similar interfaces, such as Microsoft's Windows 3, are also available for IBM-compatible personal computers.

The Apple Macintosh and Microsoft's Windows 3 are both described as object-oriented interfaces and, while this is true, the object-oriented technology goes much further than a better user interface.

Object-oriented evangelists in the software industry talk of a paradigm shift in thinking about how computer systems can be built.

Objet-oriented design includes several important ideas which help to clarify systems design and make better use of existing technology.

The formal definition of object-oriented systems covers useful concepts such as inheritance and code re-use. Inheritance allows different objects to share the same characteristics. All invoices, for example must contain an invoice date – a characteristic which is inherited by every object called an invoice.

The re-use of code is of more pragmatic use and can be seen in some personal computer software. A PC equipped with Microsoft Windows 3, for example, will use the same display-screen driver program (the software which sorts out text and graphics) in many different applications.

The big virtue for the marketing department is its universality

Language developers are in the frontline in object-oriented technology with Microsoft and Borland both offering language compilers which are described as object-oriented.

Database developments have been restricted to specialist suppliers such as Objectivity and Ontologic. But both Oracle and Ingres among others are reported to working on the technology and will deliver products later in the 1990s.

Suppliers of computer-aided software engineering (CASE) tools, especially those at the technical end of the market, have been at the forefront of the technology with US companies such as Interactive Data Environments (IDE) and Cadre Technologies leading the way.

More important, the OMG is well on the way to formulating the first of the standards which will allow object-oriented systems to work across different computer systems.

The OMG published its draft architectural specification last year and has requested tenders for the technology which will form the core of a method to control objects and the communications between them.

Later this year it is expected to publish a formal definition of what an object is and this is likely to spur on the tool, language and database providers to produce object-oriented products.

Object-oriented design promises to change computer systems design beyond recognition in the next decade. One of the advantages of the approach is that it opens the door to computing power – what was once called programming – to a much wider audience.

Although complex objects, such as invoice transactions, will still need professional expertise, less crucial processes can be engineered by users themselves.

They will be able to combine their objects with those that already exist within a system and produce their own customised working environments.

Phil Manchester

A FINANCIAL TIMES SERIES: Part 4

EUROPEAN FINANCE AND INVESTMENT

PORTUGAL

As Portugal faces increasing political and economic change, the time of easy successes for the financial community is over, reports **Patrick Blum.** The sector is experiencing stronger competition from abroad and further restructuring is needed.

The Lisbon waterfront – the Finance Ministry, Stock Exchange and several government departments are located in this area of the capital city. Lisbon is also Portugal's chief port and lies on the right bank of the Tagus River, 13 kms from the river's entry into the Atlantic Ocean, at the westernmost fringe of the European continent. Portugal's other main towns and cities include Oporto, Setúbal, Coimbra and Braga. Pictured below: Lisbon's main square, the Praca do Comercio. Pictures by Ashley Ashwood.

Tougher days ahead

THIS YEAR is likely to go by unusually quickly for Portugal. First, it is having to speed up *the pace of reform to meet next* year's European Community deadlines for the internal market. It must prepare also for its first EC presidency starting on January 1 – exactly six years after it joined the Community.

Before that, a general election, *due by October* at the latest, will decide whether Mr Anibal Cavaco Silva, the prime minister and leader of the ruling Social Democratic party, remains in power for a third term of government.

At stake will be a particular model and style of government whose achievements and shortcomings are likely to come under close scrutiny in the run-up to the election.

The result of the vote cannot be forecast, but the tenant at the Sao Bento prime ministerial residence will have his work cut out. Economic pressures are building up in spite of some striking successes.

In the years that followed its accession to the Community, Portugal benefited from propitious domestic circumstances, a favourable international environment and considerable goodwill and assistance to help it modernise and catch up with its European partners.

But it is still a relatively *poor country*, and *after five* years of rapid growth and development, new problems have emerged and some old ones are re-asserting themselves with a vengeance.

The good news is that Portugal continued to grow at a faster rate than any of its European partners last year with

The trading floor of the Lisbon stock exchange: see story, page 4. On other pages: the banking scene; bank profiles, pages 2 and 5; the economy; key facts and indicators; insurance, page 3; foreign investment, the central bank, page 4; Madeira; doing business in Portugal, page 6.

the gross domestic product rising by 4.4 per cent. Investment, up by more than 8 per cent, remained sturdy, and foreign investment rising by over 60 per cent was buoyant. Official unemployment was negligible and industrial activity high. *The current account* was almost balanced.

The bad news is that inflation at 13.4 per cent – more than twice the EC average – resisted official efforts to bring it down.

The budget deficit at close to 7 per cent of GDP is proving equally difficult to reduce, and it is keeping interest rates at punishingly high levels squeezing industry. Traditional sectors from agriculture to textiles are inefficient and facing their most serious crisis yet.

In the past few years, the government has carried out or *began several important* reforms. A land reform has opened the way for privatising the large collective farms, the gradual privatisation of companies nationalised in 1975 and 1976 has started to reduce the weight of the public sector in the economy, new labour laws have relaxed some of the rigidities of the labour market and eased conditions for dismissals, a tax reform has made tax collection more efficient, and the financial sector has seen the most extensive liberalisation *and deregulation of all, spurred* along by the need to meet the approaching 1992 deadline for an EC-wide internal market in financial services. But there is still much to be done.

Mr Rui Machete, past minister in several governments, former president of the Social Democratic party and the chairman of the parliament's budget, finance and planning committee, identifies four areas in need of fundamental structural change: agriculture, industry, social welfare and education.

Portuguese agriculture employs about 19 per cent of the active population but accounts for only six per cent of gross domestic product. Fewer than 15 years ago, Portugal's population was predominantly rural, yet it cannot feed itself and depends for more than half of its food on imports.

Part of the problem is due to an excessive division of the land into a plethora of tiny *unviable plots, mainly* in the north, and inefficient huge co-operative farms created after the revolution, mainly in the south.

Productivity is among the lowest in the EC and most farmers survive thanks to generous subsidies. Mr Machete says the land structure and the system of agricultural price subsidies will have to change, though he expects it will take several years of transition.

Industry also faces the chal*lenge of the internal market.* Most Portuguese companies remain unprepared for the inevitable increase in competition after 1992, and continue to rely on old production methods, low wages, and outdated management methods. There are exceptions, and larger companies, many of them foreign or with international links or partners, find they can achieve productivity levels comparable to those in other European countries. In contrast to the growing apprehension of some Portuguese business groups, foreign investors exude optimism, seeing in Portugal's relative backwardness as the springboard for a period of sustained and dynamic development.

Privatisation is a vital element in the strategy to open the economy to market forces, but the process has so far been slow

In the long run, foreign investment can have a ripple effect throughout the economy, encouraging the development of local suppliers and helping to raise quality standards, but the adaptation will be difficult.

A large number of small and medium-size companies will face a straightforward choice: modernise or close – many will probably have to close.

Industrial restructuring will lead to job-losses which will have to be alleviated through a more efficient and expanded social security system since it will not be possible to retrain all displaced workers.

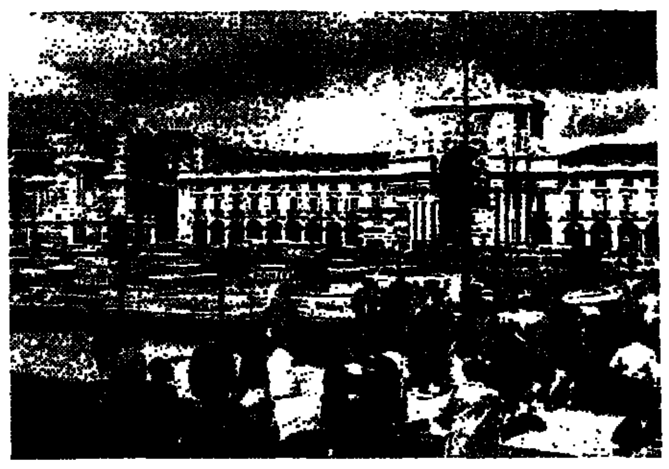
Education is in a sorry state. Teachers are under-paid, career conditions unattractive and schools and colleges plagued with recurring strikes. Illiteracy at anything between 15 per cent and 20 per cent of the population, depending on the statistics, is still widespread.

As old industries give way to new ones or modernise, training and retraining have become more important. The EC is helping through its social fund to finance training in private industry. But as Portugal prepares for the future, education will need greater resources with more emphasis placed on quality.

Reducing the weight of the state in the economy is another huge task. In economic terms, *the state accounts for* nearly 40 per cent of GDP, but its weight in particular sectors is overwhelming.

In the financial sector, it still controls about 80 per cent of the market. Once the privatisation programme is completed, the two big financial groups remaining in state hands together will have between 30 per cent and 40 per cent of the market. Privatisations are a key element in the government's strategy to reduce the weight of the state and open the economy to market forces, but the process has been slow and prone to delays.

Conditions are less favourable now than they were 18 months or a year ago, investors have become more wary especially since share prices of privatised companies have



tended to fall below their original, often high, selling price. This may not matter too much for big domestic or foreign groups whose objective is to win market positions, but it has shaken the confidence of smaller investors.

Diminishing the size of the state is only part of a wider need to reduce bureaucracy and bureaucratic interference.

"There is an enormous bureaucracy run by incompetent people who interfere in too many areas and in excessive detail," says a senior businessman airing a common complaint. Political parties and trade unions which should counter-balance the state, often operate as if they were state institutions, making it difficult at times to dissociate administrative from political decisions – "we've progressed and reached a higher stage of problems and issues to deal with," Mr Machete says. Some critics are less charitable and argue it has wasted a unique opportunity since the government had a free hand with an absolute majority in parliament.

The truth probably lies somewhere in between: quite a lot has been achieved but a lot more could have been done. Given the scale of the challenge, the task of restructuring the economy and the state may have only barely began, but the process will have to be accelerated if Portugal is to develop into a modern and competitive economy.

THE BANKING COMMUNITY

Preparing for turbulence

IN THE past five years the Portuguese banking sector has risen swiftly from a very low base. The question troubling bankers now is whether the growth can continue in the years to come.

"There have been five terrific years of banking," reflects Mr Carlos Rodrigues, president of Manufacturers Hanover (Portugal). Margins have been high, competition from the state-owned banks – which even after the latest privatisations account for 75 per cent of the sector – less than vigorous.

Up until earlier this year, the financial authorities maintained a strict credit ceiling on bank lending. According to Mr Timothy Bradbury, managing director of Lloyds Bank, Portugal (recently bought by BBV, Spain's largest bank), this meant that corporate customers "were competing to borrow. In the meantime, the private banks could buy liquidity from the public banks and lend it out under their own credit ceiling."

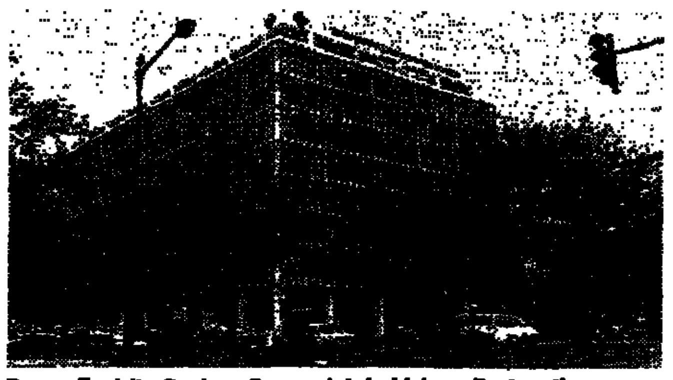
Even now, savers are paid 14-15 per cent on their deposits, subject to 20 per cent withholding tax, which works out at less than inflation. Banks then lend out the funds at 26 per cent retail and 22 per cent wholesale. With such handsome margins, it is not surprising that the banks have prospered.

The growth of the sector as a whole is captured in the extraordinary story of Banco Comercial Portugues. When the bank started in 1986, it had 205 shareholders, capital of Esc 3.5bn and 255 employees. Now it has nearly 25,000 shareholders, capital of Esc 66bn and it employs 2,500 people.

There is more turnover in BCP shares on the Lisbon stock exchange than in any other company's shares. Coming from nowhere five years ago, BCP is now one of Europe's top 100 banks in terms of capital strength and one of the 60 largest in terms of market capitalisation.

The banking industry today cannot be understood without remembering that in 1975 *all* Portuguese banks were nationalised. It was not until ten years later that the government promoted legislation allowing private banks to be set up. The first stage of deregulation drew six foreign banks into Portugal within 18 months, and local entrepreneurs founded four banks, of which BCP is the best-known.

This sudden influx of competition had a profound effect on the sleepy public sector banks. They were exposed as not merely grossly inefficient by European standards – they had more employees per branch than any other European country and fell behind by all other yardsticks – but downright insolvent.


Banco Espirito Santo e Comercial de Lisboa: Portugal's second largest state-owned commercial bank – set for privatisation.

"Throughout the 1970s and early '80s, we had a social role and we were not driven by normal financial and economic goals," reflects Mr Pedro Rebelo de Sousa, president of the Banco Fonsecas & Burnay, a state-owned bank which is hoping to be privatised later this year. By the mid-1980s, the consequences of this uncommercial approach were clear: the average percentage of bad credit to total loan portfolios among the state-owned banks had climbed to 20 per cent.

"Many of the borrowers simply didn't exist," quips one banker. Add-in unfunded pension liabilities and dubious accounting policies and the result was most of the state-owned banks were insolvent.

The reaction of Fonsecas to the new environment is typical of that of the whole state-owned sector. It shrunk its staff by 25 per cent. It shored up its balance sheet by selling off properties amid a bull market for real estate. It sorted out its provisions for bad debts and unfunded pension liabilities. It has invested heavily in information technology.

Fonsecas now considers that it is virtually indistinguishable from Portugal's private-sector banks. a feeling shared by the large state sector banks such as Banco Espirito Santo e Comercial de Lisboa, which is also hoping to be privatised later this year. The tidying up process completed, these banks like to think of the state as just another shareholder.

In this vein, Mr Alipio Dias, president of the Banco Totta & Acores, in which the government retains a residual 15 per cent holding, says "the treasury is a shareholder like any other." According to Mr Alexandre Vaz Pinto, president of the Banco Espirito Santo e Comercial de Lisboa and the chairman of the Portuguese Bankers' Association, the average percentage of bad debts to loan portfolio is down to 14 per cent across the state-owned sector.

More recently, the public and partially-public banks have shared in the general prosperity of the sector. For example, the 85 per cent privatised Banco Totta reported a 76 per cent increase in cash flow last and assets were up 33 per cent, with profits rising from Esc 73m in 1985 to 3.26bn in 1989. This year the rise in cash flows will be less, but lower provisions will mean that net profits rise by as much as 50 per cent.

The pattern is repeated at Caixa Geral de Depositos, the gargantuan state-sector bank which on its own has 25-30 per cent of the Portuguese banking market, a fact easy to understand when one considers that it has 8.5m customers out of a population of 10.5bn. Here, profits have risen from Esc 8.9bn in 1984 to Esc 29.9bn in 1989, with cash flows rising from Esc 15.5bn to Esc 82.2bn.

Caixa, which will never leave the public sector, is planning an aggressive branch-opening programme, and aims to increase its branches from 420 to 500 by the end of next year. Caixa is not alone in expanding its branch network – all the other banks are doing it too. This is but one symptom of increasing competition in the banking sector.

The government has yet to deregulate its rules forbidding banks to offer interest-bearing current accounts at anything paying anything other than nominal rates. But relaxation of this rule is expected sooner or later.

Another factor behind the increasing competition is the presence of foreign banks – in particular Spanish banks eager to repeat in Portugal the success they have had on domestic territory. More significant, though, is the recent abolition of the credit ceiling. This frees the banks' lending capacity. Combined with increased competition in the market for retail deposits, it is inevitable that banks' spreads and profit margins will narrow.

"When we were founded we realised we only had a limited time to reach a certain dimension," reflects Mr Jorge Jardim Goncalves, President of BCP.

"In 1985, we calculated that we wouldn't face intense competition for 5-7 years and that we could reach a certain market share by launching innovative products and introducing new technology. We were were always clear that in 1992 and afterwards there would be intense competition from foreign and domestic private banks."

Competition from foreign banks will be restrained for as long as the government keep in place its restrictions on short term capital flows. Looking ahead, one banker reflects that the days of easy money are over – "it's going to be war out there," he said, "and it's going to be bloody."

David Waller

Patrick Blum records the end of an era for Lloyds

Spanish banks invade

SOMETIME soon the distinctive rich, blue colours of Banco Bilbao Vizcaya (BBV), Spain's biggest banking group, will be hoisted on to the front of the modern headquarters of Lloyds Bank Portugal on Lisbon's busy Avenida da Liberdade.


Lloyds Bank building on the busy Avenida da Liberda, Lisbon. Soon, the rich, blue colours of the Banco Bilbao Vizcaya (BBV), the prominent Spanish banking group, will be hoisted on to the front of the premises.

The occasion will mark the end of an era for the British bank which put down its first roots in Portugal in 1865 as the Anglo Portuguese Bank, later transformed into the Bank of London and South America, and which has operated under its present name since the 1970s.

One of the few banks to escape the 1975 revolution's sweeping nationalisations, Lloyds kept and developed a small but highly profitable business niche in the country.

When the bank's sale to BBV for £110m is approved by the Portuguese authorities, it will also highlight the recent inroads made by Spanish banks into the Portuguese market. It is not quite a flood, but it is already a good deal more than a trickle.

Apart from BBV, Banesto has bought a leading stake in Banco Totta & Acores (BTA), Banco Santander has a substantial share of Banco de Comercio e Industria (BCI), and Banco Exterior de Espana has a main branch in Lisbon and plans to open several more branches this year.

Furthermore, Banco Hispano Americano is waiting for authorisation to transform its Portuguese investment company into a bank, Banco Central has a representative office and a standing request for a branch and several regional savings banks have representations in Portugal.

All this, of course, excludes specialised investment, leasing and real estate companies.

But whereas most Spanish banks chose either to build up their stakes gradually in local institutions as Banesto has done through BTA's privatisation or start from scratch with an investment or fund management company, BBV has taken a different route by buying up an existing private bank with a small but well-established network of a dozen branches.

It was an unexpected move, but one which fitted the Spanish group's strategy. Mr Gonzalo Terreros, BBV international manager, says the bank wanted to be in the Portuguese market to offer universal banking services with an emphasis on corporate and private banking.

He sees Portugal as a rapidly expanding market with reactions similar to the Spanish market in the early 1980s.

BBV is Spain's biggest banking group

"Spain and Portugal are the fastest growing areas in Europe," he says.

Lloyds was chosen after a study of various other possibilities including that of buying a bank that was being privatised. This was discarded as too slow, too uncertain, and as a potential source of conflict with the Portuguese authorities.

BBV wanted to avoid the controversy that surrounded Banesto's move into BTA as well as the need to have to negotiate with too many diversified shareholders.

At the same time it was not seeking a commercial bank with a large branch network. For size and nature of its business Lloyds fitted BBV's ambitions.

Calculating that Lloyds which had been cutting back on its international operations may be willing to sell, BBV approached the bank and was able to clinch a deal within a relatively short time.

"We were sure that the bank would be healthy, productive and without bad surprises. So the Lloyds trademark was a guarantee," Mr Terreros said.

Another of the bank's assets with BBV was that although Lloyds was not a typical retail bank, it had a network of branches and operated in all BBV's target markets: wholesale and retail banking with a good corporate customer base in the state and private sectors, among medium and small companies, and with a solid private clientele of high net worth individuals.

Since 1986, Lloyds has more than doubled its total assets which where valued at Es87.3bn at the end of last year with profits of Es1.2bn.

Once it is authorised to transform the bank into a 100 per cent BBV-owned Portuguese subsidiary it intends to build on the bank's present strengths and seek to capture a greater chunk of the market among small and medium-size companies and among private customers.

"We think we will be able to develop immediately new products, new customers and markets, and compete with highly attractive products in those parts of the market that are growing very fast," Mr Terreros says.

Plans are to increase the number of branches to around 35 within 18 months.

In the longer-term, the goal is to establish BBV as an important Portuguese bank with "a Portuguese team and character, not a marginal foreign bank".

Although the economy appears to have performed remarkably well, **Patrick Blum** discovers . . .

Serious underlying problems

AT FIRST sight Portugal's economy appears to have performed remarkably well. Last year, the gross domestic product grew by 4.4 per cent, exports surged, investment was up by 8.7 per cent with direct foreign investment rising by more than 60 per cent to \$3.6bn, the current account balance closed with a hardly noticeable \$61m deficit, and unemployment was below 5 per cent. Only inflation, at 13.4 per cent for the year, appeared to cloud the horizon.

Yet, in spite of the good news which merited praise from the Organisation for Economic Co-operation and Development (OECD) and the European Commission, there remain serious underlying problems of which inflation – which officials seem at times to perceive as only a temporary difficulty caused by too much success – is just one.

True, exports are rising, but not as much and not sufficiently fast to overcome an enduring trade deficit. Merchandise imports have grown much faster than exports. The value of imports of goods rose by 31.5 per cent from \$17.6bn in 1989 to \$23bn last year, while the value of exports of goods grew by a sturdy but more modest 25.2 per cent from \$12.7bn in 1989 to \$16.4bn. The deficit in traded goods rose by almost 35 per cent in 1990, resuming an upward trend that had been reversed in 1989.

It will not be easy to overcome this imbalance, although some important manufacturing projects now under way will help in the future. But for the time being, Portuguese manufactured goods tend, with few exceptions, to be of lower quality and geared to the mass market. Inefficient production methods are compensated for by the lowest labour costs in the Community, Portugal's largest market. But that comparative advantage is being increasingly eroded as competition from other EC and non-EC producers becomes more intense, and as wages rise to come more into line with those in the rest of Europe.

Mr Jose Alberto Tavares Moreira, governor of the Banco de Portugal (central bank), argues that the growth in exports demonstrates that Portuguese industry is becoming more competitive: "In spite of the strong appreciation of the escudo we have managed to have a current account practically in surplus. This shows that there has been a considerable restructuring of the economy. There have been extensive productivity gains."

That is true in some industries though the extent and significance of the restructuring is less certain. Traditional sectors such as textiles or agriculture – the two biggest areas of activity – are deeply in crisis. Repeated complaints about high interest rates – at between 21 per cent and 23 per cent for prime corporate clients for a year, or 24 per cent to 26 per cent for small companies – and recurrent calls for help from Portuguese business groups in the face of foreign competition suggest that industry remains deeply apprehensive about the future.

The current account has improved with the latest figures for 1989 showing a surplus of \$139m instead of the forecast deficit of \$550m, and initial – likely to be revised – figures for 1990 showing a deficit of \$61m compared to a forecast deficit of \$1.2bn. But this was achieved not simply because exports grew – though that helped – but in large part because of higher than expected earnings from tourism, up by almost 30 per cent from \$2.1bn in 1989 to \$2.7bn last year, and higher emigrants remittances worth \$4.2bn.

Study in contrasts: modern technology in an Oporto shoe factory where robots take the strain (left) while a farmer relies on the age-old method of tilling the soil

For Portugal to be able to benefit fully from European integration and European economic and monetary union (EMU) inflation must be brought under control and the inflation differential between Portugal and its European partners reduced. But while inflation was brought down from its 1984 peak of nearly 30 per cent to an annual rate of 9.4 per cent in 1987, it has edged back up since then.

Mr Miguel Beleza, the finance minister, appointed more than a year ago, is more cautious than his predecessor when it comes to forecasts, but his own 10.5 per cent target, later revised to 11 per cent, still fell short of the 13.4 per cent annualised average rate actually achieved – more than double the European average.

This year, the government hopes to bring down inflation to a maximum 11 per cent. Mr Tavares Moreira says this is feasible though it will be difficult because of strong demand pressure. "It is not easy to deflate an economy under these conditions," he says.

There are signs that price rises may have slowed a little with the annualised average rate in February falling 0.1 of a percentage point to 13.3 per cent, but this is still a long way from the 8 per cent which he says would be desirable to bring the escudo into the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS), a move the government would like to make as soon as possible.

Another factor may now also be entering the inflation equation. In recent years, wages have lagged behind rather than led inflation, but this could be changing. An agreement last autumn between the government and some of the unions to keep wage increases to 13.5 per cent may limit rises in the state sector, but low unemployment and labour scarcity, especially in parts of the private sector, is causing strong upward pressure with pay deals this year reaching 16 per cent. Yet wages must go up if higher productivity gains are to be achieved.

The government is caught between conflicting pressures. In the past, interest rates were kept high administratively as part of efforts to curb credit demand and consumption to fight inflation. Now, with moves towards market set rates, the main and enduring cause of high interest rates remains the budget deficit which represents between 6.5 per cent and 7 per cent of GDP. Government borrowing effectively sets the rates for the market. Privatisations which last year brought the government an extra income of nearly \$1bn, cannot help since revenue from the sale of state-owned assets cannot be used to finance the budget. Meanwhile, high interest rates and a stable currency encourage capital inflows thereby adding to inflationary pressures.

Moreover, as the economy is opened up and the financial system is liberalised it is increasingly difficult for the authorities to control capital movements. Short-term capital inflows proved especially troublesome last year having increased from \$770m in 1989 to \$1.8bn which represented more than one third of all capital movements in 1990. To discourage these mainly speculative capital movements the authorities tightened up foreign exchange rules and allowed greater fluctuations in the value of the escudo by ending the practice of maintaining a "crawling peg" according to which the escudo was depreciated by 0.25 per cent a month. The immediate effect, however, was to send the escudo up rather than down.

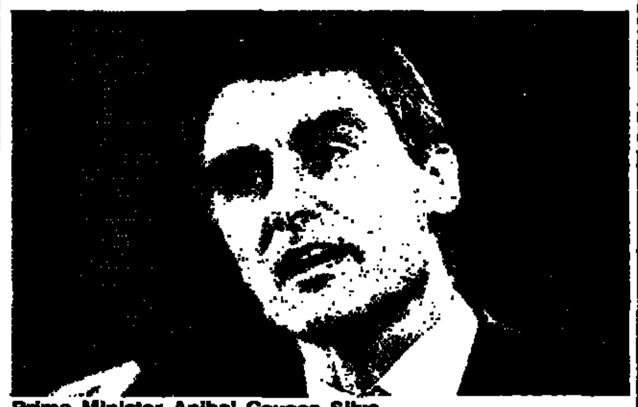
So those hoping for a depreciation of the escudo are unlikely to see their wishes satisfied. "We have to see the exchange rate level on a long-term basis, and (on that basis) the escudo is about right at the moment," Mr Tavares Moreira says, adding, "there is no alternative to maintaining a very firm monetary policy". And that means the squeeze between high real interest and exchange rates is likely to continue.

Capital movements not related to foreign debt (\$m)

	1987	1988	1989	1990
Medium and long-term capital	758	938	2217	3226
Foreign	768	1162	2505	3550
Domestic	−10	−224	−288	−324
Short-term capital*	628	1653	770	1863
TOTAL	1386	2591	2987	5089

*Any bank transaction of up to one year; note – values for 1990 may be revised.
Source: Banco de Portugal

KEY FACTS AND INDICATORS



Prime Minister Anibal Cavaco Silva

Area	92,390 sq km
Population	*10.34 million (1990 estimate)*
Head of State	President Mario Soares
Prime Minister	Anibal Cavaco Silva
Currency	Escudo (Es.)
Average exchange rate	1989, \$1 = Es 157.46; 1990, \$1 = Es 142.55

ECONOMIC INDICATORS

	1989	1990
Total GDP (\$bn)	45.4	59.6
Real GDP growth (%)	5.4	4.4
GDP per capita (\$)	4338	5656
Components of GDP (%)		
Private consumption	63.6	n.a.
Gross fixed investment	26.7	n.a.
Stockbuilding	2.6	n.a.
Government consumption	16.1	n.a.
Exports	36.6	n.a.
Imports	−45.7	n.a.
Consumer prices (% change p.a.)	12.6	13.4
Unemployment (% of labour force)	4.8	4.6
Industrial output (% change p.a.)	5.0	6.0
Reserves, *minus* gold (\$bn)	9.9	14.5
Discount rate (% p.a, Dec.)	14.3	14.5
Total external debt (\$bn)	17.8	19.6
Current account balance (\$mn)	139	-61
Exports (\$mn)	12,716	16,420
Imports (\$mn)	17,594	23,001
Trade Balance (\$mn)	−4,878	−6,581
Main trading partners (1989, % by value):	Exports	Imports
West Germany	15.7	14.4
France	15.1	11.6
Spain	12.5	14.5
UK	12.3	7.4
Total, European Community	71.5	67.9

Sources: IMF; Economist Intelligence Unit; govt.statistics.

INSURANCE

Painful changeover

PORTUGAL is grossly under-insured by the standards of the European Community.

According to a study conducted by Arthur Andersen, total premiums in 1989 amounted to Es220bn (US\$1.5bn), which works out at about 3 per cent of GDP – less than half the EC average. Premiums per head are around one-eighth of the level of the rest of Europe.

The opportunities for such an underdeveloped sector are enormous, especially in view of Portuguese people's high propensity to save. Recognising this, the number of insurance companies operating in Portugal has risen from 50 in 1986 to 65 now and an estimated 75 by the end of the year.

Like the banking sector, the insurance industry was owned and controlled by the state until the mid-1980s. The pace of change *has been slower*, though, than in banking and deregulation has in many cases brought pain rather than prosperity.

The market is extremely concentrated – the six biggest companies account for approximately 70 per cent of the industry. In 1986, all were state-owned; by now one is totally private, another is in the throes of privatisation, and three more are to be sold off by the end of next year.

Between 1984 and 1989, the state relinquished its control over tariffs in segment after segment of the insurance market. This ushered in an era of fierce price competition, which according to Mr Ruy de Carvalho, president of the Portuguese Insurers' Association, lingers on still.

Thus, in sectors such as motor insurance, big-ticket industrial insurance and workmen's compensation, premiums *have fallen dramatically* recently. "After decades of control competition is now very lively," Mr Carvalho acknowledges.

It is in the life sector that premiums rose most comfortably last year, by 26 per cent, twice the rate of inflation. It is the life business which offers the biggest opportunity for profitable expansion. This accounts for only 20 per cent of the market against an average of 40 per cent across the EC.

In total, the life market grew from Es45.5bn to 69bn over 1989-90 and the non-life from 175.5bn to 221bn.

New companies – such as Ocidental Seguros, the insurance subsidiary of the Banco Comercial Portugues – have tended to concentrate on life. Older ones – like Fidelidade, Portugal's second largest insurer now owned by the giant Caixa Geral – are scurrying to form distribution links with the banks. This form of selling is gradually replacing the army of agents who act as intermediaries.

Mirroring the success of its parent company in the banking sector, Ocidental has come from nowhere to be the 14th largest insurance company. Seguros predicts its premium income will grow by 80 per cent this year, an indication of the vigour of the life business.

The company would occupy a higher position still if motor insurance were stripped out. This accounts for a substantial proportion of the premium income *generated by the top* six insurers but, according to Mr Joao Talone, president of Ocidental, losses in this segment of the market amounted to Es7bn last year.

The total profit across the *sector was* Es6–7bn last year. Talone says that two thirds of this is not trading profit – "the only thing the big companies can do is cut their rates to keep market share," he comments. "They have made most of their money by selling properties in the middle of a bull or by selling shares bought long before the 1974 revolution.

"All the big insurers are engaged in window-dressing to make themselves look good for privatisation," he says.

"The state sector companies are hampered from doing deals with banks to secure distribution channel for life products," he continues. "Nobody knows who's going to end-up owning whom. We are selling well into our own bank because we are part of the same culture. They have been forced to compete very strongly without having the tools to take the necessary strategic decisions."

Mr Jose Antonio Santos Texeira, president of Imperio, the largest insurance company in Portugal and yet to be privatised, rejects any suggestion that the state sector is grossly inefficient.

He admits, however, that the company is handicapped by its public-sector status.

Mr Texeira would like to have a bank and a large foreign insurance company as shareholders. Rivals comment that the problem with the privatisation programme is that the state will demand a high price for its insurance assets, but will want control to remain in the hands of the Portuguese. The trouble may be that only outsiders will be willing to pay the price.

Foreign interest in the sector is high: Andersen calculated that Portuguese companies will *have less* than 60 per cent of the market by 1995. The main foreign entrants are from France and Spain, and they have considerably greater financial muscle. Ruefully, Mr Texeira says that his company's capital amounts to £2.5m, compared to the £1bn of UAP, the French group which has acquired Garantia, Portugal's seventh largest insurance company, and which is poised to take control of Alianca, another state-owned insurer – when its privatisation is finally comnpleted.

David Waller

Peter Wise investigates foreign investment and finds a . . .

Picture of satisfaction

LEICA camera bodies, the most expensive and prestigious in the world, are made in Germany. But an important part of their manufacture, together with the full production of high-precision binoculars and microscopes, is carried out near the town of Vila Nova de Familicao in north-west Portugal.

Here, 500 employees match their German colleagues for quality and are only marginally behind in productivity, according to Mr Wolfgang Koch, the group's general manager for Portugal. The only difference between the Portuguese plant and Leica's two factories near Frankfurt is that labour costs are 65 per cent lower.

"We would not be in the market at all if it were not for our lower wage costs in Portugal," says Mr Koch. Leica, now owned by Cambridge Instruments of the UK and Switzerland's Wild group, set up a subsidiary in Portugal in 1973 when the pressure of Japanese competition forced the company to choose between cutting costs or closing down.

The Portuguese operation, Leica Aparelhos Optica de Precisao, has since increased its workforce more than twenty-fold, investing a total of Es1.5bn ($10.6m) over the past five years.

Two new factory units were recently opened, raising the value of the company's exports to Es3bn a year. Management is now considering negotiating a new investment contract with the Portuguese Institute of Foreign Trade (ICEP).

Leica's success in Portugal bears out the assertion of Mr Antonio Neto da Silva, the secretary of state for foreign trade, that, "allied to efficient management and modern technology, Portuguese workers achieve productivity and quality levels to equal the best in Europe".

Twelve German technicians work at the Vila Nova de Familicao plant. But the head of the quality department is Portuguese.

"They like to say he is more German than the Germans," says Mr Koch. Local women, who make up 60 per cent of the workforce, show particular prowess at close precision work.

"The calibre of our workers; their willingness to learn skills and work hard is one of the most satisfying aspects of being in Portugal," says Mr Koch.

Sources of foreign investment (percentage of total foreign investment, 1980-89)

UK	23.1
US	12.6
France	11.4
Spain	10.9
Sweden	6.1
Netherlands	5.6
EC	64.5
EFTA	10.5
Japan	1.1

Source: ICEP

Low costs and high productivity such as those enjoyed by Leica are drawing other foreign investors to Portugal in record numbers. Direct foreign investment grew to Es509bn ($3.6bn) in 1990, a 46-per cent increase on the previous year - the increase in dollar terms was over 60 per cent. Most investment originated from Britain, followed by France and Spain. German investment, in fourth place, increased more than fourfold to Es60bn.

Foreign companies already established in Portugal accounted for 56 per cent of the total through capital increases and expansion projects.

Heavyweight projects such as the Es27.5bn investment by Continental of Germany in a tyre manufacturing joint venture made the headlines. But only two out of a total of 3,500 foreign investment projects went above Es10bn.

"It is the small and medium-sized foreign investments that are providing our industrial fabric with density and critical mass," says Mr Miguel Athayde Marques, vice-president of ICEP.

Besides illustrating the comparative advantages that are pulling foreign investors to Portugal, the Leica subsidiary is also a prime example of why the government is so keen to attract them.

The high-tech, high value-added plant is set in the Vale do Ave, the most depressed industrial region in the country, where the government estimates 45,000 jobs could be lost by 2000 as textile, clothing and footwear companies – Portugal's principal sources of export revenue – fall victim to increased competition.

"Investment in new areas with a high technological component is vital for the structural adjustment of Portuguese industry and the efficient reallocation of manpower and resources," says Mr Athayde Marques.

The sectors pinpointed by the government as having the most potential for investment are information technology and electronics, biotechnology and pharmaceuticals, technical ceramics, special purpose plastics, medical equipment, agribusiness, cars and components, equipment and machinery, sporting goods and tourism.

Foreign investment in such areas has been highly beneficial to the Portuguese economy over the past six years. Exports are becoming increasingly less dependent on the labour-intensive, low value-added sectors of clothing and shoes and moving into more technologically sophisticated areas.

Foreign manufacturers are forming upstream links with local suppliers. Their demanding requirements are helping to promote the upgrading of Portuguese companies, forcing them to improve their performance in terms of specifications, quality, and delivery times.

The benefits are also being felt in Portugal's backward agricultural sector where productivity is less than a third of average EC levels. The Plein Sud group of the French entrepreneur Mr Thierry Roussel recently launched the first stage of a planned $100m investment in two large farms to produce off-season fruit and vegetables in the southern Alentejo, and plants and flowers in northern Portugal. Both farms use modern production and management techniques that contrast dramatically with traditional methods.

The Lisbon government's eagerness to capture foreign investment is backed by attractive investment incentives for projects considered to have a positive structural impact. According to the Institute for the Support of Small and Medium-sized Industries (IAPMEI), foreign investors account for 16 per cent of the Es149bn that has been awarded in investment incentives since two EC-funded grant schemes were launched at the beginning of 1989.

That percentage is likely to undergo a substantial increase if a plan by Ford Europe and Volkwagen to invest more than Es300bn to manufacture a new multipurpose passenger vehicle in Portugal goes ahead. Officials are waiting for Brussels to approve finance for an incentive package reportedly worth between Esc 100bn and Esc 130bn before finalising the project.

The Portuguese Confederation of Industry complains this will be equal to the amount of incentives awarded to Portuguese companies over the past three years and has called for more support for local industry.

But government officials say the amount of incentives for the Ford/Volkswagen plant has been exaggerated. They defend the project, which will be the largest single foreign investment ever made in Portugal, not only for the 5,300 jobs it will create directly but for the structural impact it will have on the economy as a whole, increasing the value of exports with the planned production of 173,000 vehicles a year, promoting the growth of supply industries and indirectly creating thousands of other new jobs.

Welding optical fibres at the Cabelte works

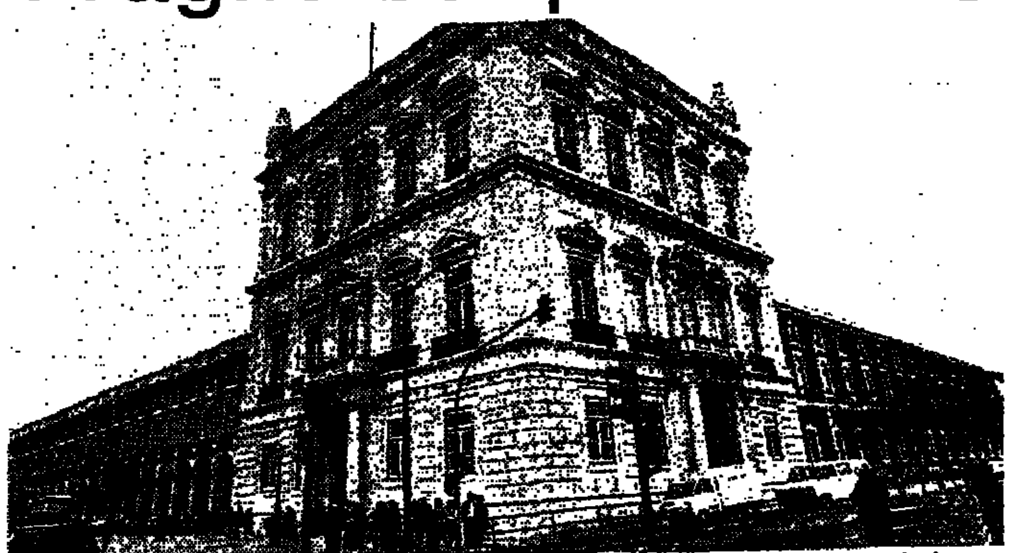
Total direct foreign investment in Portugal (Es bn)

1980	6.2
1981	9.2
1982	9.7
1983	15.7
1984	27.6
1985	42.3
1986	24.5
1987	61.6
1988	138.0
1989	353.8
1990	509.0
Total 1980-90	**1,197.9**

Source: Portuguese Institute of Foreign Trade (ICEP)

David Waller on the stock market's development

Fragile but promising



The Lisbon Bolsa in Praca do Cemercio: foreign investors account for much of the market's daily turnover, but the market's recovery this year is thought to be driven by domestic investors awash with cash because of the delayed privatisation programme.

SINCE THE mid-eighties, the Portuguese stock market has been through an exaggerated surge of business and endured a severe collapse. Only now, with a package of reforms due to be put in place this summer, are optimistic observers saying the market has calmed down after the excesses of the past half-decade.

Six years ago, the market barely existed. There was a stock exchange, but volume was minuscule and there had not been a rights issue since before the 1974 revolution. All this changed in 1985-1986. The minority Social Democrat government stimulated business confidence. Portugal joined the European Community. A bull market was born.

"The market took off in 1985-86 and carried on rising until October 1987," says Joao Rendeiro, managing director of Gestifundo, a Lisbon-based securities house. "In the run-up to the election in June 87 there was incredible euphoria. In other countries, the bull market took 10 years to build up. Here the whole process was concertinaed into just six months."

From 1983 to 1987, the number of quoted companies rose from 41 to 176; the value of share transactions rose from Esc 5.7bn ($39m) to Esc 282.4bn. The total value of securities issued on the capital markets soared. The Banco Totta e Acores (BTA) index began 1987 at 1,220, rose to a peak of 6,812 just before the crash, but fell back to 2,990 by the end of the year.

If it took a relatively short time for Portugal to enjoy a bull market, it has taken correspondingly longer for the market to revive after the crash. There have been two serious attempts at rallies, but the index ended last year at 2143.4, a fall of 34.6 per cent in local currency terms over 1990 and still well below its level at the end of 1987.

"After the crash Portuguese investors sold in panic like anywhere else," says Mr Rendeiro, "but all the weaknesses of a fragile infrastructure came to the forefront dramatically. There was a huge shift in sentiment and for more than a year afterwards the market continued to sink downwards as investors tried to come to grips with the mess left by October 1987."

The post-crash problems have been psychological and structural. Psychological, because local investors had their fingers severely burned in October 1987 and thereafter proved reluctant to get into the market. Structural, because of an antiquated settlement system and a lack of liquidity in the majority of stocks, which has discouraged all but the bravest of foreign investors.

Although the number of companies quoted on the exchanges of Lisbon and Oporto rose from 135 to 182 between 1987 and 1990, the bulk of activity is concentrated on a dozen liquid stocks. Just 10 stocks – including Soporcel (a pulp and paper company), Sonae (an industrial holdings company), Radio Marconi Portuguesa (telecommunications), Banco Comercial Portugues, and Banco Portugues de Investimento accounted for 52 per cent of the market's capitalisation at the end of 1990, while trading in these shares invariably accounts for most of the average daily $5-$6m turnover.

In January this year, the government finally approved a package of reforms meant to remedy some of the structural defects of the market. The main features are:

- The setting up of a Securities & Exchange Commission as the main regulatory and supervisory body;
- The privatisation and unification of the markets in Lisbon and Oporto. The two trading floors will remain but in future each will be managed by an association of local brokers and dealers who will be responsible for setting up an investors' compensation scheme;
- The creation of a central

Continued on facing page:

Patrick Blum discusses the central bank's changing role

Independence strengthened

SINCE 1984, Portugal's financial system has been through more change than any other sector of the economy. New private banks and financial institutions sprung up from nowhere to become leading players on the domestic market, offering new services, using more modern methods, and bringing fresh ideas to shake the complacency of the state-owned and state-run banking establishment. Deregulation gradually helped open up markets and the economy to international market forces.

Liberalisation was given a further push by European Community membership and the need to meet requirements for financial services and institutions. By 1992, Portugal will have to comply with the bulk of EC directives on the liberalisation of the financial system except for short-term capital movements for which it has won a reprieve likely to last for another two to three years.

The Banco de Portugal (central bank) which for years after the 1974 revolution had been little more than a conveyor belt for Finance Ministry edicts has not escaped the movement for reform, winning a new, more independent lease of life.

It is now undergoing a programme of important changes that has already strengthened its independence and improved its operations. Mr Jose Alberto Tavares Moreira, the bank's governor, says that within three to four years the reform will be completed and the bank will have radically changed structures.

"At the end of that period we'll have a structure composed of six main departments organised on the basis of the essential functions of the bank, compared with 19 departments when we started with the reform, and 12 departments now," he says. The six departments will be responsible separately for economic research, the money markets, foreign exchange operations, banking supervision, staff and administration, and issuing currency. Each one will have its own director.

The streamlining of functions will be accompanied with a streamlining of staff which will be reduced from about 3,000 at the start of the reform almost two years ago (now 2,300) to about 2,000 employees.

But at least as important for the bank are the reforms outlined in a draft law approved last autumn enhancing its autonomy. While Portugal's central bank will not be as independent as Germany's Bundesbank, it will be more independent than the Bank of England or the Banque de France.

In the past, the central bank was independent only in theory. It was described as the country's issuing bank, responsible for foreign exchange regulations and currency management, as well as for the orientation and control of monetary policy, but with an important proviso: that it would carry out all these functions "within the guidelines" established by the Finance Ministry. And while it could give its opinion on monetary and fiscal policy, in practice the last word always belonged to the government. The bank was essentially an administrative, and at times, political, instrument of government.

In what was a highly regulated financial environment the central bank acted as a gendarme to ensure that the minutiae of economic and monetary policy dictated by the Finance Ministry in great detail was properly enforced.

Under its new statutes, it has won far greater freedom of action and is required to fulfil its functions "taking into account" government policies. It "collaborates in defining" monetary and exchange rate policy and "keeps a watch over the stability of the financial system". It advises on monetary and financial policy, and is responsible for supervising the monetary, financial and foreign exchange markets.

It is also no longer obliged, as in the past, to lend funds to the government. It was not uncommon for a government suddenly pressed for cash to ask the bank for the money. This was a convenient way for governments to hide part of their indebtedness and raise money cheaply since interest rates were set administratively. The bank could argue, but in practice it could not reject a government request for credit.

The bank's management and the position of its governor have also been strengthened and given greater responsibilities. In the past the bank's only authority was its collective management board of which the governor was an administrative chairman, but under the new statutes the governor's role and authority have been enhanced.

Stock market reforms

Continued from previous page: depository and settlement system;

■ The implementation of a new paperless trading system, at first only for the blue-chips, eventually for the market as a whole, giving investors continuous stock prices; and

■ rules and penalties on insider dealing, takeovers and mergers; share manipulation and disclosure rules.

The package will be implemented in June at the earliest; preliminary reforms were introduced earlier this year (when the two exchanges introduced a second daily price-fixing for the most liquid stocks) and at the beginning of this month when a new partially computerised trading system was introduced in Lisbon.

"The initial impact of the stock market reform is difficult to assess," says Mari Vargas, a London-based analyst at BNP Securities, "but it should bring greater efficiency and liquidity to stock exchange transactions for the benefit of investors.

"Costs are also expected to go down... and the major foreign institutional investors, including the Americans, that have been reluctant to face the difficult trading conditions should reconsider their investment decisions."

Foreign investors, while accounting for much of the turnover, and owning 15 per cent of the market by market capitalisation (at the end of September 1990), were net sellers in the fourth quarter of 1990.

The market's recovery in the first months of this year – up from 1986 at its lowest point in mid-January to 2515 – is thought to be driven by domestic investors awash with cash because of the delayed privatisation programme.

A revival of this programme in the months ahead will soak up that demand and is likely to tempt back foreign investors who have traditionally been keen on new issues.

As the early privatisations will be banks and insurance companies, the market's heavy skewing towards financial services will be exacerbated: large sectors of the economy such as property and tourism are under-represented, while banks alone accounted for 39 per cent of the market's capitalisation at the end of last year.

The Portuguese market is the EC's smallest stock market and last year was the worst performer. But it gives investors the opportunity to invest in a small but dynamic economy.

Thus, if the market is still fragile, it certainly has potential – "for the first time in five years, stocks and p/e ratios are in line with international standards," says Mr Rendeiro.

"Prices react to events and information in a normal way. For the first time we begin to have a real market."

Patrick Blum looks at the controversial privatisation programme

Quest for the right balance

FEW issues have been quite as controversial as the government's privatisation programme in spite of a broad consensus in favour of selling companies nationalised in the mid-70s.

Though there has been some opposition to the privatisations from groups of former owners who are mostly seeking better compensation, and, on the left, from those who want to preserve a large state sector, in practice the government has had a free hand.

This has allowed it to establish what must be the largest privatisation programme in Europe outside the former communist countries.

Plans are to sell dozens of leading companies including banks, insurance companies, manufacturers of a wide range of products from cement to beer, chemicals to pulp and paper, steel and oil distribution companies, leading utilities including telecommunications, the tobacco monopoly, the state airline, shipping and bus companies, to the last state-owned newspaper.

The scale of the programme has not really been at issue, rather criticism has focused on the way it has been undertaken. The government has been accused of selling companies on the cheap to foreigners, of inflating share prices to maximise revenues, of distorting the market by imposing rigid limits on the purchase of privatised shares by the same foreigners, of failing to protect adequately Portuguese interests, of going about it in a half-hearted way, and of failing to use privatisations as a means of restructuring the economy.

It is an illustration of the difficulty of the task that in one way or another all of these conflicting criticisms can be held to be partially true. Local business groups have been most vocal in attacking the government for failing to defend Portuguese interests.

Criticism has focused on the way that privatisation has been undertaken

They argue that the method of selling companies on the stock market combined with the high price set for privatised shares effectively rules out a greater role by Portuguese investors who do not have the financial clout of large foreign groups.

The problem is that there are too few large Portuguese groups able to absorb the volume of privatisations planned even if prices were lower. One suggestion is that potential Portuguese investors should be given preferential credit terms to help them buy into companies.

To counter the criticism that it is selling off the family silver to foreigners, the government has imposed rigid limits on the amount of privatised shares foreigners can buy, but this has proved ineffective.

Foreign companies have managed either directly or indirectly through local alliances to win key if not majority stakes in most of the companies privatised so far.

What the limits have done is to distort the process, make it less transparent, and push prices up further.

Most critics believe the government's main objective has been to maximise revenues from the sales, which last year alone brought it revenues of more than Es140bn ($970m) in six operations.

That figure is likely to look small if this year's programme which includes selling several banks and some leading companies is fully carried out, though this appears less certain now. The programme has unfolded in fits and starts, and has faced repeated delays. These have been exacerbated by the Gulf war, and several privatisations due in the first quarter of the year have yet to take place.

A general election is due by October at the latest and this will increasingly occupy the minds of ministers.

Perhaps the most serious charge is that not enough thought has been given to using the privatisation process to restructure important parts of the economy.

The government's answer is that by privatising public companies it is doing precisely that and strengthening the market economy.

Critics are not convinced – "privatisations in the financial sector, for example, are decided piecemeal," says a leading economist.

"There is no overall strategy, but what we need is an active restructuring to prepare quickly the economy for the single (European) market.

"The government should intervene selectively to help the formation of Portuguese groups, otherwise we'll miss a unique opportunity."

Picture by Ashley Ashwood

Mr 'Miguel Beleza, Portugal's finance minister: he prefers caution to speed in the privatisation programme, but insists that the programme is nevertheless on target. Most critics believe the government's main objective has been to maximise revenues from company sales, which last year alone brought it revenues of more than Es140bn ($970m) in six operations.

Case study: Banco Totta & Açores

Step by step to private ownership

WHAT happens when a state-owned bank becomes private, and how does it prepare for the change?

For Mr Alipio Barrosa Pereira Dias, president of the Banco Totta & Açores (BTA), the first Portuguese bank to be privatised, save for about 16 per cent remaining in state hands, privatisation was a crucial factor for the bank's future development not just because of the change in ownership, but because it enabled the bank to do several things that it could not do before.

The privatisation itself took place in three separate stages: an initial floation on the stock exchange of 49 per cent of the bank's share capital in July 1989, followed just over a year later with the sale of anothger 31 per cent stake.

A capital increase last December, finally brought the private shareholding in the bank to above 84 per cent.

Despite government limits on the purchase of privatised shares by foreigners, Banesto, the Spanish banking group, managed to build up directly and indirectly a controlling interest in the bank.

Today, Banesto holds directly around 10 per cent of the shares, while Valores Ibericos – a joint venture with a Portuguese partner in which it holds 49 per cent, has another 28 per cent. Other shareholders are small and in practice Banesto has effective control of the bank.

From the very begining, the privatisation had a dramatic impact on the bank.

First and foremost, it allowed it to strengthen its capital base and grow.

Like all Portuguese state-owned banks that were nationalised in 1975, BTA had seen its need for fresh capital frustrated by the unwillingness of successive governments to provide new funds.

A weak capital base was a common problem for the nationalised banks. It was a double handicap at a time when a system of credit ceilings - established in the late 1970s and only recently abandoned - limited the amount a bank was allowed to lend on the basis of its capitalisation.

With expansion thus constrained, BTA had to face increasingly tough competition from new foreign and private Portuguese banks allowed to operate once more after an initial liberalisation of the banking system in 1984.

By 1989, the need for fresh capital had become urgent if the bank was going to remain competitive and grow. Privatisation came just at the right moment.

"It became possible to raise the bank's capital and with more capital we could expand our activities. This was the most important effect of privatisation," Mr Dias says.

Paradoxically, the credit ceilings now started to work in BTA's favour. The state-owned banks which were denied new injections of funds from the government could only strengthen their own capital base either by issuing limited amounts of participation certificates, or by ploughing back into the bank what profits the state as main shareholder would decide to leave them.

This clearly hampered their development, which was already more difficult because of their heavy burden oif bad debts, inefficient structures and overstaffing.

The second most important effect was to give the bank a new sense of direction.

Mr Dias who had joined BTA in 1988, prepared a new strategic plan for the bank aimed at modernising operations, improving research and internal controls, increasing the number of branches, and making more efficient use of human resources.

Staff had to be reduced and productivity raised, older employees were retired early or retrained.

Whereas in December 1987 the bank had on average 37 employees per branch, this is now down to 23 employees.

The total number of employees has been reduced from about 4,500 in 1988 to 4,200 today in spite of an increase in the number of branches from 127 in February 1988 to 173 now.

Mr Dias says he expects to open up another 10 to 15 branches by the end of this year. Productivity has risen dramatically, helped by the introduction of new computing and software systems.

Privatisation also meant changes in the image of the bank and in the attitude of its employees.

"Sometimes it was simple things, like employees coming to work in casual clothes without a tie. We had to explain to them this gave the bank a bad image. But you couldn't legislate this, you had to win their cooperation," he says.

Another problem was the length of the privatisation process. For a period of months, the future of the bank and of its shareholding structure remained uncertain. This made it especially important for the bank's management to maintain the full confidence of both the financial authorities and of its staff.

"It was crucial during the privatisation to make people understand the need for the process," Mr Dias says.

Consultations and persuasion created a better climate than edicts from above and sackings, though some lay-offs were inevitable.

But over a year and a half after the initial part-privatisation, Mr Dias feels he has overcome the biggest obstacles – "now we compete on equal terms with the private banks. By next year we'll be in a position to do much more."

Patrick Blum

Patrick Blum discusses Madeira as an offshore business centre

Slow but steady take-off

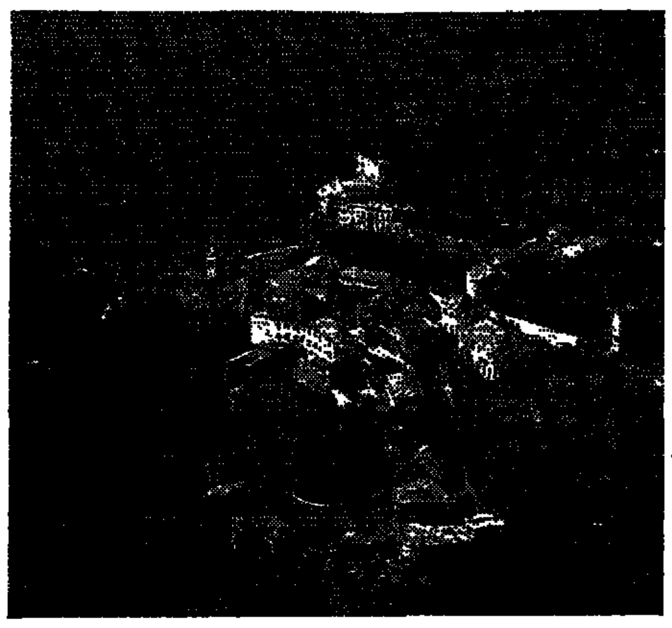
IT HAS not exactly been plain sailing for Madeira's offshore business centre. Establishing a new legal framework to cover financial institutions, manufacturers in the free trade zone and a new international shipping register has taken up more time and encountered more bureaucratic obstacles than expected. Nevertheless, Madeira is slowly taking off as a viable alternative or addition to existing offshore centres in Europe and elsewhere.

"If you look at the early years of other centres, their own development was not any faster than ours. Early days are always difficult," says Mr Francisco Costa, chairman of the Madeira Development Company (SDM), which is responsible for developing the island's offshore activities.

In spite of initial problems, Madeira already has attracted a good number of businesses including 13 banks, 231 service and trading companies, and 10 manufacturing companies. Another five banks have applied to set up an offshore branch, 10 more service companies have applied for a licence, and three more manufacturing companies are waiting for authorisation to operate in the free trade zone. Response to the shipping register has been slower with only five vessels registered so far.

Initially, only branches of banks and investment companies could operate in the offshore centre. This was later extended to all financial institutions. Now new laws are being prepared to allow funds to be domiciled locally and to enable the local incorporation of full banks and insurance companies as opposed to only branches. Mr Costa expects these to be in place this year.

The shipping register has posed bigger problems. Until now, all crews for Portuguese registered ships had to be 100 per cent Portuguese, a standard requirement in Portugal. This is in the process of being changed so that crews will only need to be 50 per cent from the European Community. Restrictive and uncompetitive Portuguese mortgage regulations were another problem, and this is also being changed to allow ship-owners to choose the law under which they will operate when registering a ship. New legislation will also allow private yachts to be registered.



Madeira: attracted a good number of businesses

Mr Carlos Sousa, general manager of Steermar, a ship management services company, says he expects to register 80-100 ships in the first year after the new law is approved. "Foreign shippers are waiting for the change. We've had many enquiries, especially from Germany," he says.

The free trade zone has had more success with a mix of companies from as far apart as Brazil (plastics), Ireland (gold and jewellery), Lebanon (textiles and marble), Liechtenstein (precision optical instruments), Hong Kong (garments), and Portugal (construction materials, tobacco, electronics, food, and chemicals). Only a handful have started work, the others are building their own factories or in the process of installing machinery.

The free zone is on a 120-hectare site on Madeira's eastern coast some 8km from the airport and 30km from Funchal, the island's main town. Next to the smaller town of Canical, it is easily accessible though the roads and a tunnel leading to the site are having to be widened and upgraded to cope with the heavier traffic. About half the initial 40 hectares to be prepared in a first phase of development have been completed: the land levelled, roads and infrastructures including water supplies and telecommunications installed. Work on a new deep sea port directly serving the site began in October 1990 and is due to be completed by the middle of next year. The island's main airport will be expanded to enable it to receive bigger aircraft and to improve freight facilities.

Officials say rents are competitive at $13.50 per square metre of land per year for a minimum of five years for companies building their own installations, and $40 per square metre for ready-made building.

Offshore financial business is centred in Funchal. So far all but one of the bank branches established are Portuguese. The exception is Lloyds Bank Fund Management of Guernsey, to be joined soon by Banque Franco Portugaise of France. Mr Costa believes this is to be expected of the centre's development. "It is important to have Portuguese banks. It has a demonstration effect showing Portuguese banks are confident about the centre's prospects."

The banks do any type of business from taking deposits – there is strong competition for remittances of emigrant Portuguese workers and the savings of the wider Portuguese community around the world – to trade financing, fund management and granting credit.

There are considerable attractions for investors and companies. Incentives include full tax holidays until 2011 for all financial institutions, trading and manufacturing companies setting up offshore or in the free zone. This allows banks, for example, to offer better conditions to their customers at no extra costs.

Foreign exchange rules have been liberalised. However, this has caused some concern to the financial authorities in Lisbon. Accordingly, the central bank has asked for clarification on regulations covering the operations of Portuguese non-banking institutions which it argues should be treated under the same tax regime as their mother companies and not as foreign companies. The central bank would like all non-financial Portuguese companies wishing to operate offshore to first seek the bank's approval. "There's a hole in the legislation on this," a bank official says.

Several Portuguese or Madeiran companies, such as Companhia Insular de Moinhos (CIM), a biscuit and pasta manufacturer, are moving into the free zone to take advantage of the favourable tax regime. CIM is also using the opportunity to restructure and modernise its production.

Requests for information have been "pouring in", according to Mr Joao Luis Dias, director of Dixcart Management (Madeira), a subsidiary of the Dixcart group. He says establishment procedures have greatly improved, making it possible to incorporate a company within a little more than two weeks.

Office space has been scarce, but supply is improving. Dixcart recently moved into new premises while The New Madeira Investment Servicos, another management company, prepares to make its own move. The original optimism appears unchanged. "The centre is well regulated and we keep standards high. I don't have any doubts about the future," Mr Costa says.

Trams in Lisbon: if you are in a hurry, Portugal is not for you

Doing business in Portugal

Standards are rising

"PORTUGAL," quipped a Mozambican friend, "is an African country with a European vocation."

The remark, neatly turning round a popular saying about Portugal's historic links with Africa, has more than a grain of truth in it.

Life in Portugal, especially in the southern half of the country, is tempered by a distinctly non-European nonchalance; spontaneity, a tendency to leave decisions to the last minute and a desire to please, all mixed with a strong streak of fatalism, seem designed to test the patience of visitors. If you are in a hurry, Portugal is not the place for you.

If you add to that problems that result from an as yet under-developed infrastructure, poor though improving telecommunications, and the dead weight of a massive state bureaucracy with its over-abundant "red tape," it is easy to see why business people occasionally despair they will ever get anything done.

Portugal's ties with its former colonies in Asia, with Portuguese-speaking Brazil and more especially with Africa, are still much in evidence.

Immigrants from Cape Verde, Angola and Mozambique make up a good proportion of workers on building sites in and around Lisbon.

In late afternoons, the northern side of the Rossio, the capital's main square, is animated with groups of immigrants who have made it a meeting point to exchange gossip or simply while away the hours.

But for all these vivid reminders of Portugal's colonial past, Lisbon has been rediscovering Europe with an official enthusiasm matched only by generous helpings of European Community funds.

EC membership is assisting Portugal to overcome decades of neglect and changing attitudes. Foreign investment has poured into the country helping to modernise industries and infrastructures.

The pressure of EC integration is forcing the pace of change.

The range and quality of goods and services is improving, new businesses are bringing more ideas and promoting the cause of efficiency. Standards of living have risen, though wide disparities of wealth are still noticeable.

Wages are the lowest in Europe, and this has been an important attraction for foreign investors.

While the public sector is plagued with poor industrial relations and strikes from government bureaucrats to policemen, teachers, doctors, and museum attendants, the private sector is practically free of strife.

Managers of multinational companies say that while local workers generally have lower initial skills, they respond well to training and can achieve levels of proficiency that can compete with levels elsewhere.

Housing is often sub-standard with poor safety and hygiene. There is a serious housing shortage, but foreign executives can find better quality accommodation in Lisbon or Oporto though at prices closer to those in other European cities.

Office space is a problem and prices are high though after 1992 they should stabilise as more commercial property comes on the market.

Bureaucracy and red tape are infuriating, though the right connections will usually help speed matters, but not always.

Brush a local government official the wrong way, and the water link that you so desperately need will be dammed at source by forms and unanswered letters. Construction work is slow and requires constant supervision; delays are common.

Appointments will often be changed, sometimes at the very last minute, and few will actually start on time playing havoc with business schedules.

Minor officials can be wrong-headed and infused with an exaggerated sense of their own importance. Service, especially in the state sector, is bad – reflecting the fact that many state employees are poorly paid and trained. Taxi drivers are probably among the rudest in the world and you will be lucky to get a grunt back as an acknowledgement after you mention your destination.

Finding a garage to park your car is difficult and expensive, but it could save having to pay for broken windows and stolen car radios if you leave your car in the street, even if you live in a smart part of town.

If you are planning to live outside Lisbon and drive in, travel before or after the rush hour to avoid long jams. And always drive defensively – Portuguese drivers are among the worst and probably the most dangerous in Europe, giving Portugal the highest proportion of fatal road accidents in the Community. Insurance premiums are high.

But for all these drawbacks, there are big compensations. Apart from four months between December and April when it can rain torrentially for days and temperatures are low, the climate is mild, the summers long and hot, and the beach is never very far away.

At the height of the tourist season, it is best to avoid the main resorts along the Algarve, but there are still many places left to visit along the coast and in the interior.

From the green hills of the Minho where *vinho verde* (red and white) is produced in the north, along the Douro river and valley that runs downhill from Spain in the east through stunning landscape to Oporto, through the Serra da Estrela mountains in the centre, and south, across the Alentejo, with its miles of practically-deserted beaches and torrid interior landscape, there is plenty to delight and discover.

Portugal has much to offer those who like to live outdoors. There is a wide choice of sea food and some good wines, and once off-duty a temporary resident can enjoy a pleasant and relaxed lifestyle.

Patrick Blum

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